Dell 2145cn
Service Manual

10 Mar 2009

Information in this document is subject to change without notice.
2010 Dell Inc. All rights reserved.

Reproduction in any manner whatsoever without the written permission of Dell Inc.is strictly forbidden.
Trademarks used in this text: Dell and the DELL logo are trademarks of Dell Inc.

Other trademarks and trade names may be used in this document to refer to the entities claiming the marks and names of their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

Table of Contents

1. Precautions

1.1 Safety Warning ••••••

Continued

3.3.11 Fuser Control Board ••••••

Continued

5.7 Top Cover ••••••

1. Precautions

In order to prevent accidents and to prevent damage to the equipment please read the precautions listed below carefully before servicing the printer and follow them closely.

1.1 Safety Warning

(1) Only to be serviced by appropriately qualified service engineers.
High voltages and lasers inside this product are dangerous. This printer should only be serviced by a suitably trained and qualified service engineer.

(2) Use only Dell replacement parts
There are no user serviceable parts inside the printer. Do not make any unauthorized changes or additions to the printer, these could cause the printer to malfunction and create electric shock or fire hazards.

(3) Laser Safety Statement
The Printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class 1(1) laser products, and elsewhere, it is certified as a Class I laser product con-forming to the requirements of IEC 825. Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

Warning >> Never operate or service the printer with the protective cover removed from Laser/ Scanner assembly. The reflected beam, although invisible, can damage your eyes. When using this product, these basic safety pre-cautions should always be followed to reduce risk of fire, electric shock, and injury to persons.

CAUTION - INVISIBLE LASER RADIATION WHEN THIS COVER OPEN. DO NOT OPEN THIS COVER.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GE...FFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS DÔOUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI APERTURA. EVITARE LÕESPOSIZIONE AL FASCIO.
PRECAUCION - RADIACION LASER IVISIBLE CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.
ADVARSEL. - USYNLIG LASERSTRLNING VED BNING, NR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDG UDSAETTELSE FOR STRLNING.
ADVARSEL. - USYNLIG LASERSTRLNING NR DEKSEL PNES. STIRR IKKE INN I STRLEN. UNNG EKSPONERING FOR STRLEN.
VARNING - OSYNLIG LASERSTRLNING NR DENNA DEL R ...PPNAD OCH SPRREN R URKOPPLAD. BETRAKTA EJ STRLEN. STRLEN R FARLIG.
VARO! - AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NKYMTT...MLLE LASER-STEILYLLE L KATSO STEESEEN.
注 意 - 严禁渴开此盖, 以免激光泄露灼伤
주 의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로 주의하십시오.

1.2 Caution for safety

1.2.1 Toxic material

This product contains toxic materials that could cause illness if ingested.

(1) If the LCD control panel is damaged it is possible for the liquid inside to leak. This liquid is toxic. Contact with the skin should be avoided, wash any splashes from eyes or skin immediately and contact your doctor. If the liquid gets into the mouth or is swallowed see a doctor immediately.
(2) Please keep Drum cartridge and Toner Cartridge away from children. The toner powder contained in the Drum cartridge and Toner Cartridge may be harmful and if swallowed you should contact a doctor.

1.2.2 Electric Shock and Fire Safety Precautions

Failure to follow the following instructions could cause electric shock or potentially cause a fire.

(1) Use only the correct voltage, failure to do so could damage the printer and potentially cause a fire or electric shock.
(2) Use only the power cable supplied with the printer. Use of an incorrectly specified cable could cause the cable to overheat and potentially cause a fire.
(3) Do not overload the power socket, this could lead to overheating of the cables inside the wall and could lead to a fire.
(4) Do not allow water or other liquids to spill into the printer, this can cause electric shock. Do not allow paper clips, pins or other foreign objects to fall into the printer these could cause a short circuit leading to an electric shock or fire hazard.
(5) Never touch the plugs on either end of the power cable with wet hands, this can cause electric shock. When servicing the printer remove the power plug from the wall socket.
(6) Use caution when inserting or removing the power connector. The power connector must be inserted completely otherwise a poor contact could cause overheating possibly leading to a fire. When removing the power connector grip it firmly and pull.
(7) Take care of the power cable. Do not allow it to become twisted, bent sharply round corners or other wise damaged. Do not place objects on top of the power cable. If the power cable is damaged it could overheat and cause a fire or exposed cables could cause an electric shock. Replace a damaged power cable immediately, do not reuse or repair the damaged cable. Some chemicals can attack the coating on the power cable, weakening the cover or exposing cables causing fire and shock risks.
(8) Ensure that the power sockets and plugs are not cracked or broken in any way. Any such defects should be repaired immediately. Take care not to cut or damage the power cable or plugs when moving the machine.
(9) Use caution during thunder or lightening storms. Dell recommend that this machine be disconnected from the power source when such weather conditions are expected. Do not touch the machine or the power cord if it is still connected to the wall socket in these weather conditions.
(10) Avoid damp or dusty areas, install the printer in a clean well ventilated location. Do not position the machine near a humidifier. Damp and dust build up inside the machine can lead to overheating and cause a fire.
(11) Do not position the printer in direct sunlight. This will cause the temperature inside the printer to rise possibly leading to the printer failing to work properly and in extreme conditions could lead to a fire.
(12) Do not insert any metal objects into the machine through the ventilator fan or other part of the casing, it could make contact with a high voltage conductor inside the machine and cause an electric shock.

1.2.3 Handling Precautions

The following instructions are for your own personal safety, to avoid injury and so as not to damage the printer

(1) Ensure the printer is installed on a level surface, capable of supporting its weight. Failure to do so could cause the printer to tip or fall.
(2) The printer contains many rollers, gears and fans. Take great care to ensure that you do not catch your fingers, hair or clothing in any of these rotating devices.
(3) Do not place any small metal objects, containers of water, chemicals or other liquids close to the printer which if spilled could get into the machine and cause damage or a shock or fire hazard.
(4) Do not install the machine in areas with high dust or moisture levels, beside on open window or close to a humidifier or heater. Damage could be caused to the printer in such areas.
(5) Do not place candles, burning cigarettes, etc on the printer, These could cause a fire.

1.2.4 Assembly / Disassembly Precautions

Replace parts carefully, always use Dell parts. Take care to note the exact location of parts and also cable routing before dismantling any part of the machine. Ensure all parts and cables are replaced correctly. Please carry out the following procedures before dismantling the printer or replacing any parts.

(1) Check the contents of the machine memory and make a note of any user settings. These will be erased if the mainboard or network card is replaced.
(2) Ensure that power is disconnected before servicing or replacing any electrical parts.
(3) Disconnect printer interface cables and power cables.
(4) Only use approved spare parts. Ensure that part number, product name, any voltage, current or temperature rating are correct.
(5) When removing or re-fitting any parts do not use excessive force, especially when fitting screws into plastic.
(6) Take care not to drop any small parts into the machine.
(7) Handling of the OPC Drum
- The OPC Drum can be irreparably damaged if it exposed to light.
  Take care not to expose the OPC Drum either to direct sunlight or to fluorescent or incandescent room lighting. Exposure for as little as 5 mins can damage the surface? photoconductive properties and will result in print quality degradation. Take extra care when servicing the printer. Remove the OPC Drum and store it in a black bag or other lightproof container. Take care when working with the covers(especially the top cover) open as light is admitted to the OPC area and can damage the OPC Drum.
- Take care not to scratch the green surface of OPC Drum Unit.
  If the green surface of the Drum Cartridge is scratched or touched the print quality will be compromised.

1.2.5 Disregarding this warning may cause bodily injury

(1) Be careful with the high temperature part.
The fuser unit works at a high temperature. Use caution when working on the printer. Wait for the fuser to cool down before disassembly.
(2) Do not put finger or hair into the rotating parts.
When operating a printer, do not put hand or hair into the rotating parts (Paper feeding entrance, motor, fan, etc.). If do, you can get harm.
(3) When you move the printer
- The equipment weighs approximately 36.6 Kg (including consumables), therefore pay attention when handling it.
- Be sure not to hold the movable parts or units (e.g. the control panel, ADF) when transporting the equipment.
- Be sure to use a dedicated outlet with 110V/220Vpower input.
- The equipment must be grounded for safety.
- Select a suitable place for installation. Avoid excessive heat, high humidity, dust, vibration and direct sunlight.
- Provide proper ventilation since the equipment emits a slight amount of ozone.
- The equipment shall be installed near the socket outlet and shall be accessible.
- Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.

1.3 ESD Precautions

Certain semiconductor devices can be easily damaged by static electricity. Such components are commonly called “Electrostatically Sensitive (ES) Devices” or ESDs. Examples of typical ESDs are: integrated circuits, some field effect transistors, and semiconductor “chip” components.
The techniques outlined below should be followed to help reduce the incidence of component damage caused by static electricity.

Caution >>Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

1. Immediately before handling a semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, employ a commercially available wrist strap device, which should be removed for your personal safety reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ESDs, place the assembly on a conductive surface, such as aluminum or copper foil, or conductive foam, to prevent electrostatic charge buildup in the vicinity of the assembly.
3. Use only a grounded tip soldering iron to solder or desolder ESDs.
4. Use only an “anti-static” solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
5. Do not use Freon-propelled chemicals. When sprayed, these can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective packaging until immediately before installing it. Most replacement ESDs are packaged with all leads shorted together by conductive foam, aluminum foil, or a comparable conductive material.
7. Immediately before removing the protective shorting material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
8. Maintain continuous electrical contact between the ESD and the assembly into which it will be installed, until completely plugged or soldered into the circuit.
9. Minimize bodily motions when handling unpackaged replacement ESDs. Normal motions, such as the brushing together of clothing fabric and lifting one’s foot from a carpeted floor, can generate static electricity sufficient to damage an ESD.

1.4 Super Capacitor or Lithium Battery Precautions

1. Exercise caution when replacing a super capacitor or Lithium battery. There could be a danger of explosion and subsequent operator injury and/or equipment damage if incorrectly installed.

2. Be sure to replace the battery with the same or equivalent type recommended by the manufacturer.

3. Super capacitor or Lithium batteries contain toxic substances and should not be opened, crushed, or burned for disposal.

4. Dispose of used batteries according to the manufacture’s instructions.

2. Product spec and feature

2.1 Product Specifications

2.1.1 Product Overview

Concept	A4 Tandem CMFP to Maximize office Productivity
Target	SMB (Office Work for Heavy Color Print/Copy/Scan)

- Scan, Copy, Print, Fax 4 in 1 MFP
- Speed : 20/20 PPM (A4)
- Resolution : 2400x600 dpi (effective output)
- CPU : 360 Mhz
- Memory : 128 MB
- Toner Cartridge Life (Color/Black) : 5K / 5.5K

2.1.2 Specifications

Product Specifications are subject to change without notice. See below for product specifications.

2.1.2.1 General Print Engine

Item		Dell 2145cn
Engine Speed	Simplex	B&W : Up to 20 ppm in A4 (21 ppm in Letter) Color : Up to 20 ppm in A4 (21 ppm in Letter)
	Duplex	B&W : Up to 10 ipm in A4 (10 ipm in Letter) Color : Up to 10 ipm in A4 (10 ipm in Letter)
Warmup time		Less than 49 sec
FPOT (B&W)	From Ready	Less than 25 sec
	From Idle	Less than 65 sec
	From Coldboot	Less than 75 sec
FPOT (Color)	From Ready	Less than 25 sec
	From Idle	Less than 65 sec
	From Coldboot	Less than 75 sec
Resolution	Optical	600 x 600 dpi
	Support	Max : 2,400 x 600 dpi effetive output Default : 1200 x 600 dpi

2.1.2.2 Controller & S/W

Item		Dell 2145cn
MPU		360 MHz
Memory	Std.	128MB
	Max.	384MB
Memory Expansion		1 Slot
Printer Languages		SPL-C, PostScript3, PCL6
Fonts		45 scalable and 1 bitmap PCL and 136 PS

Item		Dell 2145cn
Driver	Supporting OS	Windows 2000/XP/2003/Vista/2008(include 64bit)
		Various Linux OS including Red Hat 8.0~9.0, Mandrake 9.2~10.1, SuSE 8.2~9.2 and Fedora Core 1~4
		Mac OS X 10.3~10.4 and Universial Mac
	Default Driver	PCL6
	Driver feature	Watermark Overlay N-up printing Poster printing Duplex Quality (Best/Normal/Draft) Color mode (Color, Gray scale) Copies Setting (Window Only) Color spec. Support Device color Service homepage connection
	WHQL	Windows 2000/XP/2003/Vista (include 64bit)
	Language Localization	English, French, German, Italian, Spanish, Dutch
Scan driver	TWAIN	Yes(Windows, Mac, Linux)
	WIA	Yes(Windows only)
Application	Scan Manager	Yes (multi-folder)
	PC-FAX	Yes (Mono Send Only, included in SmarThru Office)
	PSU	USB only
	Status Monitor	Yes
	Network Management	Set IP (Linux, Mac not support)
	SmarThru	SmarThru Office 2.0
Network	Protocol	TCP/IP,SNMPv3,HTTP1.1, IPP
	Network OS	Windows 2000/XP(32/64bit)/2003 Server(32/64bit)/Vista Server(32/64bit) NetWare 5.x, 6.x Mac OS X 10.3~10.4 - TCP/IP Only Various Linux OS including Red Hat 8.0~9.0, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 HP-UX, Solaris, SunOS, SCO UNIX
Security		N/A

2.1.2.3 Interface

Item	Dell 2145cn
Parallel	N/A
USB	USB 2.0, USB host 2.0(Scan to USB, USB print)
Hard Disk	OPTION
Network	Ethernet 10/100 Base TX
Wireless	OPTION
LCD & Button	16 x 2 line LCD (Yellow BackLight)
Foreign Device Interface	Yes (EDI)

2.1.2.4 Scan

Item		Dell 2145cn
Scan method		Color CCD
Scan Speed	Linearity, Halftone	about 15 sec at 300dpi,USB2.0,P4 3.0GHz, 512M /Ltr
	Gray	about 20 sec at 300dpi,USB2.0,P4 3.0GHz, 512M /Ltr
	Color	about 30 sec at 300dpi,USB2.0,P4 3.0GHz, 512M /Ltr
Resolution	Optical	1,200*600 dpi
	Enhanced	4,800*4,800 dpi
Halftone		256levels
Scan Size	Max. Document Width	Max.216mm
	Effiective Scan Width	Max 208mm(8.2”)
	Max. Document Length	Max.297mm(11.7”) @platen, 356mm(14”) @DADF
	Effiective Scan Length	Max 289mm @platen, 348mm @DADF
Scan Depth	Color	Inernal : 36 bit, External : 24bit
	Mono	- 1bit for Linearity & Halftone - 8Bit for Gray scale
Scan Function		Scan to USB, SMB, FTP, Network,Email
Compatibility		[Windows] - Windows 2000/2003/XP/Vista
		Various Linux OS including Red Hat 8.0~9.0, Mandrake 9.2~10.1, SuSE 8.2~9.2 and Fedora Core 1~4
		Mac OS X 10.3~10.4 and Universial Mac

2.1.2.5 Copy

Item		Dell 2145cn
Copy Speed	Simplex Copy Speed(A4)	20cpm (A4)
	Duplex Copy Speed(A4)	6200ND/6210FX : 6.6 image per sec (about 33% of simplex) 6200FX : N/A
FCOT (B&W)	From Ready	Less than 31 sec
	From Idle	Less than 71 sec
	From Coldboot	Less than 78 sec
FCOT (Color)	From Ready	Less than 37 sec
	From Idle	Less than 77 sec
	From Coldboot	Less than 85 sec
Zoom Range		25% to 400% for Platen25% to 100% for ADF
Multi Copy		1~99
Original Type (Mono)	Text	Scan : 600x600dpi(Otical 600x300dpi), Printing : 600x600dpi
	Text/Photo	Scan: 600x600dpi(Otical 600x300dpi), Printing : 600x600dpi
	Magazine	Scan : 600x600dpi(Optical 600x300dpi) @ ADF, Printing : 600x600dpi Scan : 600x600dpi(Optical 600x600dpi) @ Platen, Printing : 600x600dpi
	Photo	Scan : 600x600dpi(Optical 600x300dpi) @ ADF, Printing : 600x600dpi Scan : 1200x1200dpi(Optical 600x600dpi) @ Platen, Printing : 1200x1200dpi
Original Type (Color)	Text	Scan : 600x600dpi(Optical 300x300dpi), Printing : 600x600dpi
	Text/Photo	Scan : 600x600dpi(Optical 300x300dpi), Printing : 600x600dpi
	Magazine	Scan : 600x600dpi(Optical 600x300dpi) @ ADF, Printing : 600x600dpi Scan : 600x600dpi(Optical 600x600dpi) @ Platen, Printing : 600x600dpi
	Photo	Scan : 600x600dpi(Optical 300x300dpi) @ ADF, Printing : 600x600dpi Scan :1200x1200dpi(Optical 300x300dpi) @ Platen, Printing : 1200x1200dpi
Original Type	Factory Default	Text/photo
Automatic Background Suppression		Yes
Darkness Control		5 level
Collation Copy		Yes

Item		Dell 2145cn
Special Copy	ID Card Copy	Yes(Platen Only)
	Auto fit	Yes(Platen Only)
	Margin Shift	Yes
	Book Copy	Yes
	Auto Suppression	Yes
	Covers	No
	Transparencies	No
	Create Booklet	No
	N-up copy	2-up, 4-up
	Clone	Yes (Platen Only)
	Poster	Yes (Platen Only)

2.1.2.6 Fax

Item		Dell 2145cn
Compatibility		ITU-T G3
Communication System		PSTN/PABX
Modem Speed		33.6Kbps
TX Speed		3sec(Mono/Standard/ECM-MMR.ITU-T G3 No1.standard)
Compression		MH/MR/MMR/JPEG/JBIG
Color Fax		Yes
ECM		Yes
Resolution (Mono)	Std	203*98dpi
	Fine	203*196dpi
	S.Fine	300*300dpi
Resolution(Color)		200 x 200 dpi
Scan speed		3.6 sec / Letter (Mono, scan time)
Telephone Features	Handset	No
	On hook Dial	Yes
	Search	Yes (Phone Book)
	1-Touch Dial	30
	Speed Dial	240 locations
	TAD I/F	Yes
	Tone/Pulse	Selectable in Tech Mode
	Pause	Yes
	Auto Redial	Yes
	Last Number Redial	Yes
	Distinctive Ring	Yes

Item		Dell 2145cn
Telephone Features	Caller ID	No
	External Phone Interface	Yes
Functions	Mail Box	No
	Voice Request	No
	TTI	Yes
	RTI	Yes
	Polling	No
	Earth/Recall	No
	Auto Reduction	Yes
	SMS	No
	RDS	Yes
Report & List Print out	Tx/Rx Journal	Yes
	Confirmation	2 types available (with Image TCR, w/o image TCR, Mono Only)
	Auto Dial List	Yes
	System Data List	List all user setting
Sound Control	Ring Volume	Yes (Off, Low, MED, HIGH)
	Key Volume	Yes (On, Off)
	Speaker	Yes (On, Off,Comm)
	Alarm Volume	Yes (On, Off)
Junk Fax barrier		Yes
Security Receive		Yes
Fax Memory Backup		Yes (Serial flash)
Receive Mode		Fax, TEL, Ans/Fax
Capacity		less than 4 MB (200 Pages) (Mono)
Optional Memory		No
Max locations to store to 1 Group Dial		240 locations
Fax Forward to FAX		Yes (On/Off), both Sent and Received, Mono Only
Fax Forward to e-mail		Yes
Broadcasting		up to 249 locations, Mono Only
Delayed fax		Yes (Tx only, Mono Only)
Memory RX		Yes

2.1.2.7 Paper Handling

Item		Dell 2145cn
Standard Capa.		250-sheet Cassette Tray, 100 MP
Max. Capa.		850 sheets @ 75g/㎡
Printing	Max. Size	216 X 356((8.5” x 14”)
	Min. Size	76 x127mm (3” x 5”)
	Margin(T/B/L/R)	4 mm, 4 mm, 4 mm, 4 mm
MP tray Capacity		100 sheets @ 75g/㎡
MP tray Sensing		Empty sensingNo size sensor
Standard Cassette Capacity		250 sheets @ 75g/㎡
Standard Cassette Size sensor		N/A
User Interface		Indicator
Sensing		Empty sensing
SCF Cassette Capacity		500 sheets @ 75g/㎡
SCF Cassette Size sensor		N/A
User Interface		Indicator
Sensing		Empty sensing
Output Stacking Capacity	FaceUp	N/A
	FaceDown	180 sheets @ 75g/㎡ in N/N
Output Full sensing		Yes
Finishing		N/A
Duplex Supporting		Std.
ADF		DADF
ADF Capacity		50 sheets @ 75g/㎡

2.1.2.8 CRU

Item		Dell 2145cn
No. of CRUs		5 (C/M/Y/K toner, PTB) K toner cartridge: CLP-K660B C toner cartridge: CLP-C660B M toner cartridge: CLP-M660B Y toner cartridge: CLP-Y660B Paper Transfer Belt: CLP-T660A
Toner	Black	■ Standard Yield Average K Cartridge Yield 2500 standard pages Declared yield value in accordance with ISO/IEC 19798:2006(E) ■ High Yield Average K Cartridge Yield 5500 standard pages Declared yield value in accordance with ISO/IEC 19798:2006(E) ※ Ships with Standard yield Starter toner cartridge
	Color	■ Standard Yield Average K Cartridge Yield 2000 standard pages Declared yield value in accordance with ISO/IEC 19798:2006(E) ■ High Yield Average K Cartridge Yield 5000 standard pages Declared yield value in accordance with ISO/IEC 19798:2006(E) ※ Ships with Standard yield Starter toner cartridge
	Life detect	Life detect Sensor(None), Traced via software 90% exhausted: Low message 100% exhausted: Empty message
	Replace method	CRUM for appropriate installation of each cartridge3 step for install/ replacing
PTBY	Yield	50,000 pages
	Key	Unique, Electronic key(CRUM)
	Sensor	None, that would be traced via software
	Replace method	3 steps for install/replacing

2.1.2.9 FRU

Item	Sec_Code	Expected Life (Pages)
Fuser	JC91-00934A(110V)	100 K
	JC91-00933A(220V)	
Pick-up Roller (Main, MP)	JC90-00932A(Main)	70K
	JC96-02686B (MP)	
Friction Pad	JC97-03077A (CST)	70K
	JC97-02892A(MP)	
[DADF/ADF] Pick-up Roller	JC97-03070A(DADF)	80K
[DADF/ADF] Friction Pad	JC97-03069A(DADF)	20K

2.1.2.10 Reliability & Service

Item		Dell 2145cn
Printing Volume(AMPV)		1,140 page (B&W : 400 page, Color : 740 pages)
Max Monthly Duty		65,000 pages
MPBF		58,000 pages
MTTR		<30 min.
SET Life Cycle		200,000 image or 5 years whitchever comes first
Real-time Clock		None
System-record		Total page count (color/mono) Fuser life Transfer belt life Toner Life(CMYK) Tray roller life First operation date(Not revealed to Users)
Test Print		Configuration SheetDemo Sheet
RDC	Comm. Mode	N/A
	Operation	N/A
Temperature	Operating	15~32.5 (59~90.5)
	Storage	-20~40(-4~104)
Humidity	Operating	10~80RH
	Storage	0~95RH

■ Machine Life

CRU/FRU	Modes	Life (Expected Average based on AMPV usage ratio)				Max. Life	
		Expected Life		Total Image	Total Page	Color only (page)	Mono only (page)
		pages	Images				
SET	Mono (40%)	80,000	80,000	200,000	200,000	200,000	0
	Color (60%)	120,000	120,000			0	200,000
Toner Cartridge (5% coverage)	Cyan	5,000		5,000	5,000	5,000	
	Magenta	5,000		5,000	5,000	5,000	
	Yellow	5,000		5,000	5,000	5,000	
	Black	5,500		5,500	5,500	5,500	
PTB Unit	Color	50,000	50,000	50,000	50,000	50,000	
	Mono	50,000	50,000			-	
Fuser Unit	Color	100,000	100,000			100,000	0
	Mono	100,000	100,000			0	100,000
Friction Pad	Color / Mono	70,000				70,000	70,000
	Color / Mono	70,000				70,000	70,000
DADF pickup	20ppm	70,000				70,000	70,000
DADF friction Pad	Color / Mono	70,000				20,000	20,000
Scan Assy	20ppm	70,000				70,000	70,000
DADF	20ppm	70,000	70,000			70,000	70,000

Toner Cartridge yield : Average CMY Cartridge Yield 5000 standard pages
Average K Cartridge Yield 5500 standard pages

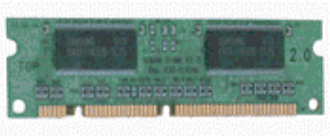
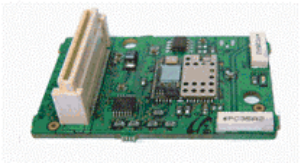
Declared yield value in accordance with ISO/IEC 19798

* Scan assy life : The life is estimated based on around 30%~ 35% usage of total function of MF till the machine life .

2.1.2.11 Environment

Item		Dell 2145cn
Acoustic Noise Level(Sound Power/Pressure)	Print & Copy	Less than 53 dBA print @ CST Less than 54 dBA copy @ CST Less than 56 dBA print & copy @ SCF &MP
	Standby	Less than 35 dBA
	Sleep	Background noise level
Input Voltages		110-127 VAC, 50/60Hz
		220-240 VAC,50/60Hz
		Power Switch
Power Consumption	Ready	Less than 82W
	AVG.	Less than 580W
	Max/Peak	Less than 1400W
	Sleep	Less than 18W
Dimension (W x D x H)	Set	468 x 498 x651 mm
	Set Packing	650 x 445 x 920 mm
	Consumables Packing	620 X 430 X 325 mm (24.4” x 16.9” x 12.8”)
Weight	Set (with consumables)	37kg
	Set Packing	48kg
	Consumables	1.9kg
	Consumables Packing	8.3 Kg

2.1.2.12 Option

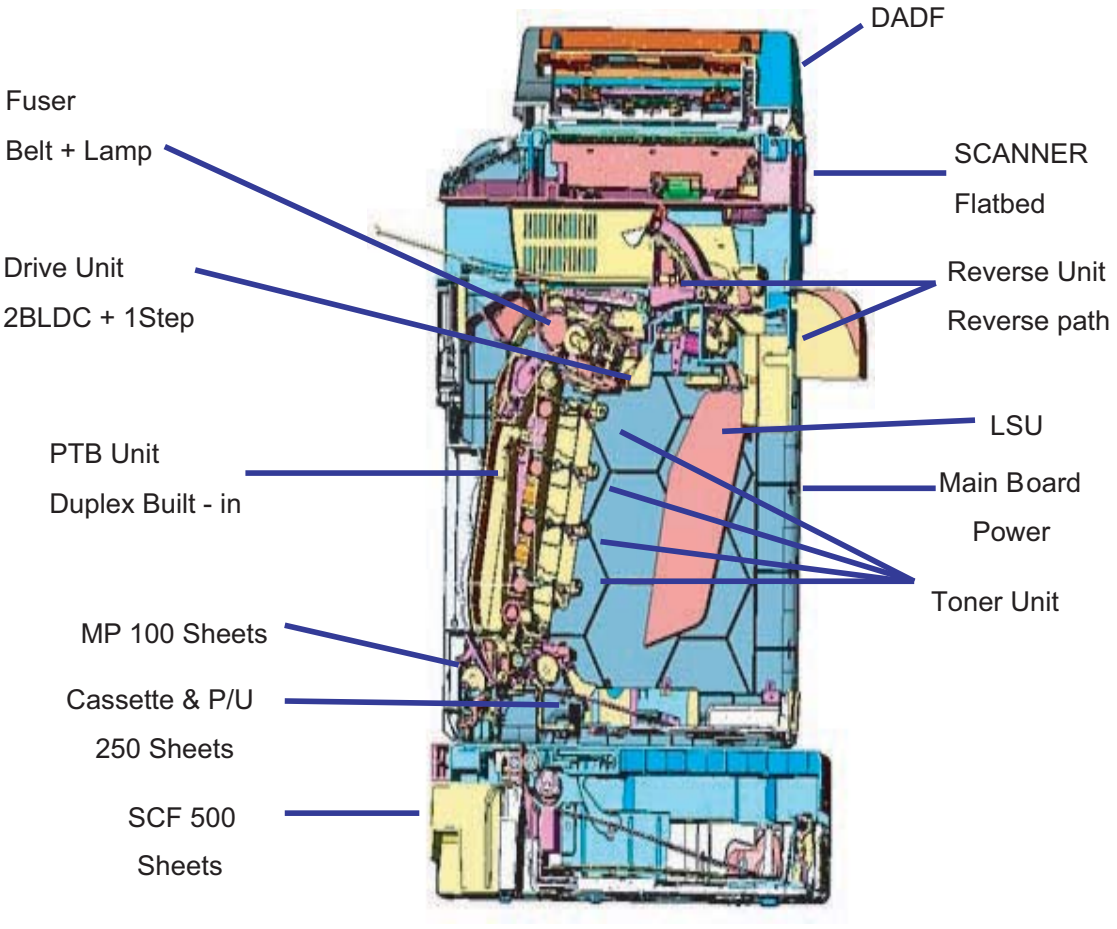
ACCESSORIES	PART NUMBER	IMAGE
Memory module	• CLP-MEM201 : 128MB • CLP-MEM202 : 256MB	
Optional tray 2	CLX-S6240A (500 Sheet)	
IEEE 802.11b/g Wireless LAN card	ML-NWA10L - 6210FX	

2.1.3 Competitor Model

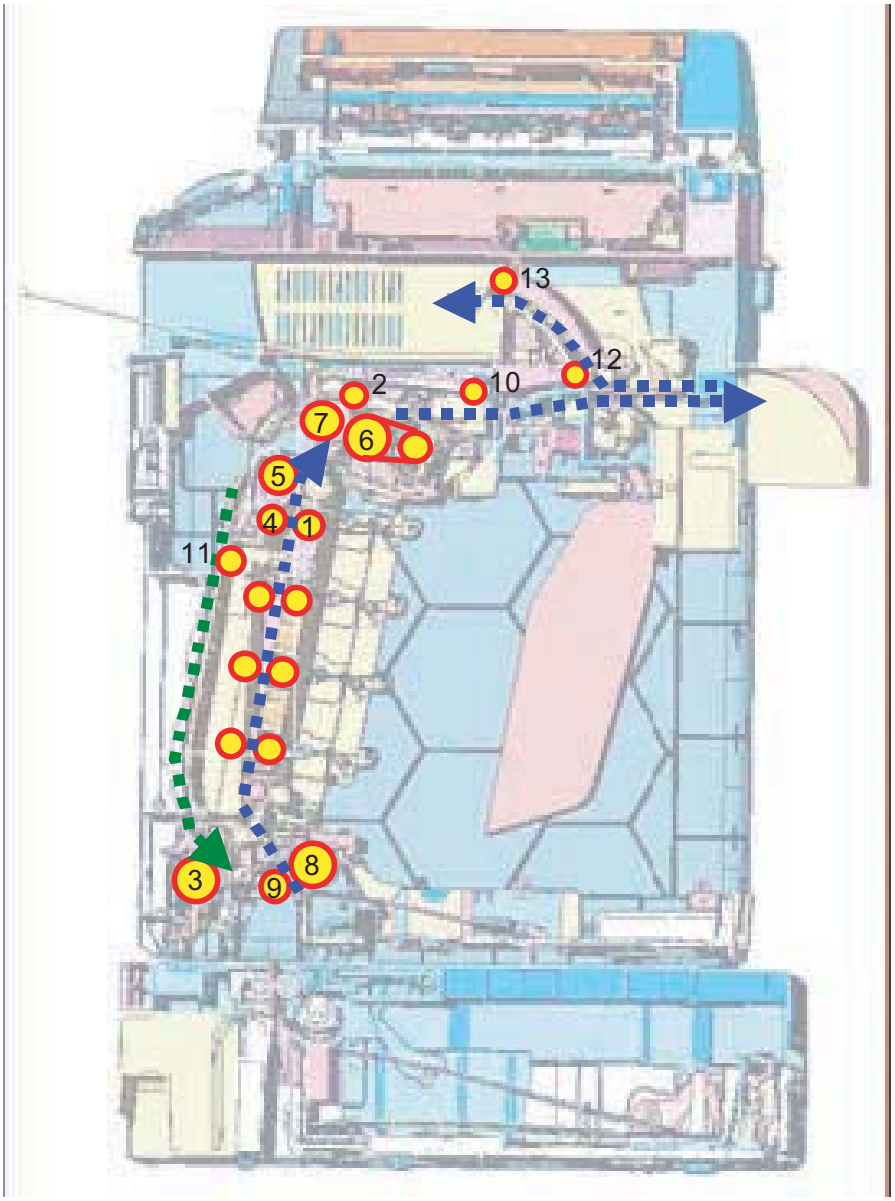
	Dell 2145cn	Brother MFC 9420CN	HP 2840	OKI C5510N
Image				
Printing speed	20/20 ppm	31/7 ppm	19/4 ppm	20/12 ppm
Processor	300MHz	-	264MHz	-
RAM	128MB	64MB	96MB	96MB
MAX Memory	640MB	576MB	224MB	224MB
Hard disk	80GB (Optional)	N/A	N/A	N/A
Print Resolution	2400 effective output	2400 x 600	2400 Image Ret	2400 x 600
FPOT (Color/Mono)	25/25sec	20/14 sec	29/18 sec	-
Print Language	SPL-C, PCL6, PS3	PDL	PDL	GDI
Copy speed (Color)	20/20 ppm	31/8 ppm	19/4 ppm	20/12 ppm
ADF	50 shts (ADF)	35 shts (ADF)	50 shts (ADF)	50 shts (ADF)
Input	250 CST, 100 MP	250 CST	250 CST, 125MP	300 CST, 100MP
Duplex	Std	Manual	Manual	-
Toner (Black/Color)	5.5 K/5K	10K/6.6K	5 K/4K	5K/5K, 3K/3K
Interface	USB 2.0, N/W	USB 2.0, N/W	USB 2.0, N/W	USB 2.0, N/W
Fax	Yes	Yes	Yes	-

2.2 System Overview

■ Product Configuration

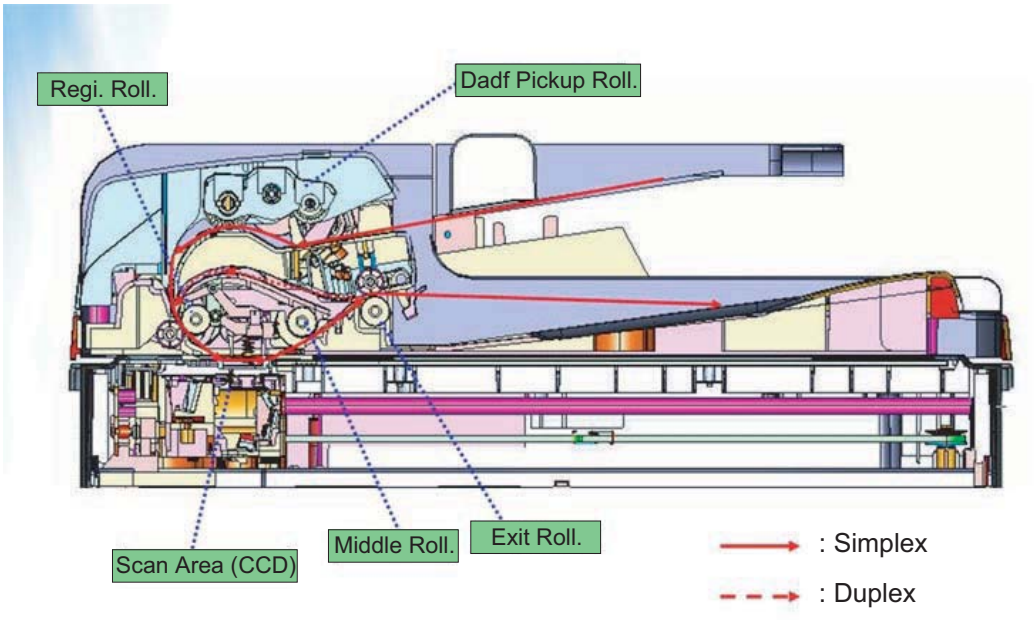


■ Engine Layout



1	OPC	8	Pick-up Roller
2	Charge Roller	9	Regi Roller
3	MP Roller	10	Exit Roller
4	Deve Roller	11	Duplex Roller
5	Transfer Roller	12	Reverse middle Roller
6	Heat Roller	13	Reverse Exit Roller
7	Pressure Roller		

■ DADF


Regi. Roll.
Dadf Pickup Roll.
Scan Area (CCD)
Middle Roll.
Exit Roll.
: Simplex
: Duplex

2.2.1 Main parts of system

1) PTB Unit (Paper Transfer Belt)

PTB stands for Image Transfer Belt. An image developed on the Toner Cartridge is transferred first to the PTB. This is called the T1 Transfer Paper Charge Roller.
Images are built up in layers on the PTB.
First the Yellow (Y) color image is created on the Toner Cartridge and transferred to the PTB.
Next the Magenta (M) color image is created on the Toner Cartridge and transferred to the PTB.
Followed by the Cyan (C) and Black (K) images.

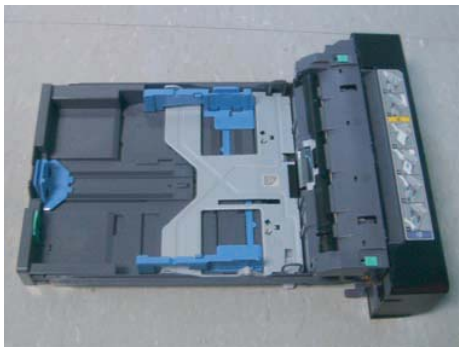
2) Transfer Roller

Once the complete, full color, image, has been built up on the PTB the Transfer Roller is used to transfer the image on to paper.

3) FCT (First Cassette Tray)

It stores and automatically feeds print paper.
Pick-up Roller picks up paper, controls drive, feeds paper, removes static electricity, and so on.

> Spec.
* Feeding Method : Cassette Type
* Feeding Standard : Center Loading
* Feeding Capacity : Cassette 250 Sheets
  (75g/ , 20lb Paper Standard) Manual Feeder
* Paper Detecting Sensor : Photo Sensor
  (Empty, Registration, Exit)
* Paper Size Sensor : None



4) SCT (Second Cassette Tray)

This additionally stores and automatically feeds printing paper. Its function is the same as the FCT (First Cassette Tray)

> Spec.
* Paper Direction : FISO (Front-in, Side-Out)
* Cassette Type : A4, Ltr
* Paper Discharge : Separation Claw
* Capacity : 500 Sheets (Standard paper 75mg/m2 20lb)
* Paper Size : A4, Letter
* Paper Weight (average) : 60~90g/ (16~24lbs)
* Paper Type : General Printing Paper
* Additional Function : Paper Empty Sensor
Paper Registration Sensor
Paper Exit Sensor

5) MPT (Multi Purpose Tray)

The Multi-Purpose Tray not only feeds general printing paper but is also used for many other kinds of paper such as those paper sizes not supported by the cassette, envelopes, etc.

> Spec.

* Capacity : Cut Sheet : 100 Sheets (Standard paper 75mg/m2 bond)
* OHP : 300 Sheets
* Envelope & Label & Card Stock : 10 Sheets
* Paper Arrangement : Center Loading
* Power : Main Motor (Stepper Motor)
* Driving Management : Solenoid
* Paper Discharge : Friction Pad Method
* Paper Size : Legal, Folio, A4, Letter, Executive, JIS B5, A5, A6
* Paper Weight (Average) : 75~163g/m2 bond(20 to 43lb)
* Paper Type : General, Label, Post Card, Transparency, Envelope, Card Stock (Tracing Paper is not served)
* Additional Function : Paper Empty Sensor

6) Toner Cartridge

There are four toner cartridges, each containing a different color ink : C (Cyan), M (Magenta), Y (Yellow), and K (Black).
Each one of these toner cartridge is independent and can be changed independently.

* Method of Toner supply : Toner is transported to the developing roller by supply belt.
* Regulating Toner level : Regulating Toner level by SUS.Blade.
* Developing method : Non-magnetic 1 element non-contracting mehtod.
* Toner : Non magnetic 1 element shatter type toner
* OPC cleaning : Collect the toner by using Cleaning Blade
* The life span of toner cartridge ; 5000(YMC)/5500(K) sheets (ISO/IEC 19798 standard pages)

7) Fuser Unit

This unit consists of IH-HEAT ROLLER, Thermostats and a Thermistor. It melts and fuses the toner, transferred by the transfer roller onto the paper, by applying pressure and high temperature to complete printing job.

* Heat Lamp : New Part - Dual Lamp Type
* Fusing system : Belt fusing type
  - Heat roller : Pipe type (Lamp inside)
  - Pressure roller
  - Fuser roller
  - Belt
* Thermistor - Temperature-Measuring Device
* Thermostat - Critical Temperature-Detecting Device

1. Thermostat

When a heat lamp is overheated, a Thermostat cuts off the main power to prevent over-heating.
  - Non-Cotact type Thermostat

2. Fuser Belt

The fuser belt transfers the heat from the lamp to apply a heat on the paper.
The surface of the fuser belt is coated with Teflon, so toner does not stick to the surface.

3. Pressure roller

A pressure roller mounted under a heat roller is made of a silicon resin, and the surface also is coated with Teflon. When a paper passes between a heat roller and a pressure roller, toner adheres to the surface of a paper permanently.

8) LSU

LSU consists of LD(Laser Diode) and polygon motor control. When the controller generate the printing signal LD will turn on and Polygon motor starts. If the receiving part in LSU detect the beam and then Hsync is generated. When the rotation of polygon motor is steady, it is time of LSU ready status for printing. If either of two condition is not satisfied, LSU error is expected.

Trouble	Failure Analysis
Polygon Motor Error	No steady rotation of Polygon Motor
Hsync Error	In spite of steady rotation of Polygon Motor,No the generation of the Hsync signal

9) Main Drive Unit

This motor drives, by way of a gearbox, the Toner Cartridge, PTB unit, feeder unit, fuser unit.

> Spec.
* Power : 20W Max (24V)
* Drives : Toner Cartridge, PTB unit, Fuser, Feeder

10) DEVE Drive Unit

This motor drives, by way of a gearbox, the toner cartridges and PTB cleaning cam.

> Spec.
* Power : 20W Max (24V)
* Drives : DEV (4 Color)/PTB Cleaning)

11) SMPS (Switching Mode Power Supply)

This power supply uses the AC supply voltage to generate the DC voltages used by the system.
The SMPS has 5 output channels (+3.3V, +5V, +24V).

12) HVPS (High Voltage Power Supply)

The HVPS creates the high voltages (Transfer, Charge, Attr, Supply DC, Supply AC) used for the electro photographic process. The high voltage is created from the 24V line from the SMPS. High Voltage output is supplied to the toner cartridge, PTB unit.

13) Main Controller PBA

The Main controller PBA is very important as it is the heart of printer. It has several major function blocks.

* CPU : This manages the printing order from the host, creates bitmap data for the engine to print and controls various devices that are needed to operate the printer.
*Engine Control Block: This manages images and controls various kinds of I/O
* Memory Block : The operating system uses this to store video data and printing orders given by host.
* ROM Block : The printer OS and PDL Interpreter are stored here.
* In addition there are USB 2.0 Block, IEEE 1284 Block, Option Block, OPE Panel, etc.

14) Drive PBA

Each toner cartridge requires the HV Supply only when that colour image is being processed. This unit takes its HV source from the HVPS and using 4 solenoids selects which cartridge is to receive the Supply voltage. This section also contains the DEVE motor, DEVE clutch, and DEVE solenoid drives. These are activated in sequence as required by the printing process.

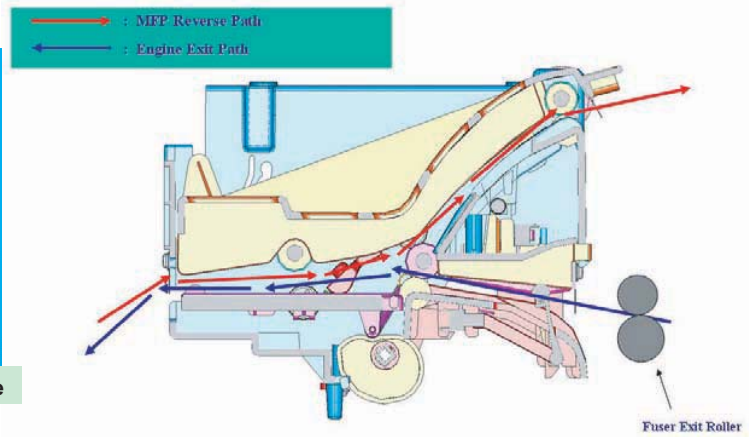
15) DEVE CRUM PBA

This detects new or used toner cartridges and also checks that cartridges are approved parts. If a toner cartridge is not suitable for the machine an error message is displayed.

16) Reverse Ass'y

* The life span : Print over 200k
* 1 Motor, 1 Solenoid

Reverse



17) Scan Part

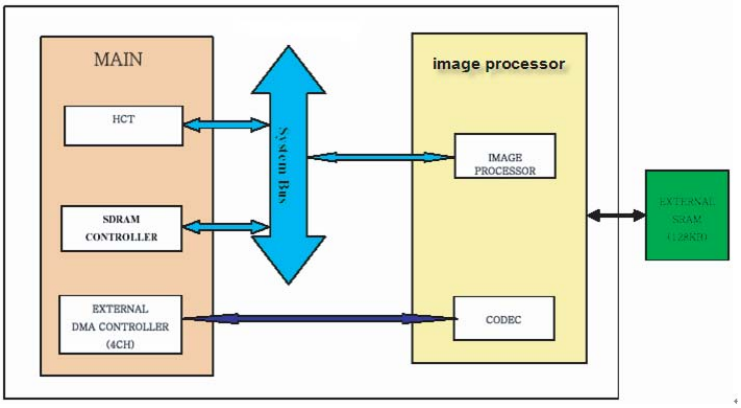
1) Pictorial signal input part : output signal of CCD passes through MP Cap change to AFE, and defined signal between AFE and Image Processor processes the Image signal. When AFE accept each pixel, CDS(Correlated Double Sampling) technique which samples arm-level twice is used on each pixel by using IP signal.

2) Pictorial image processing part : read CCD Pixel data in terms of 600dpi Line and process Error Diffusion Algorithm on Text mode and Photo mode, and then store Data at Scan Buffer on PC Scan mode without algorithm.
On every mode Shading Correction and Gamma Correction are executed ahead, then processing is executed later.

* Scan Image Control Specification
  1. Minimum Scan Line Time: 0.36ms for Copy.
  2. Scan Resolution : Max. 600DPI
  3. Scan Width : 216mm
  4. main function
     - Internal 12 bit ADC
     - White Shading Correction
     - Gamma Correction
     - CCD Interface
     - 256 Gray Scale

3) CCD Operating Part : CCD Image sensor use +5V and Inverter uses +24V
- CCD Maximum Operating Frequency : 12MHz
- CCD Line time : 0.36ms for Copy.
- White Data output Voltage : 0.7V 0.5V (Copy, 0.36ms/line)
- Maximum Inverter Current : 600 mA Max.(+24V)

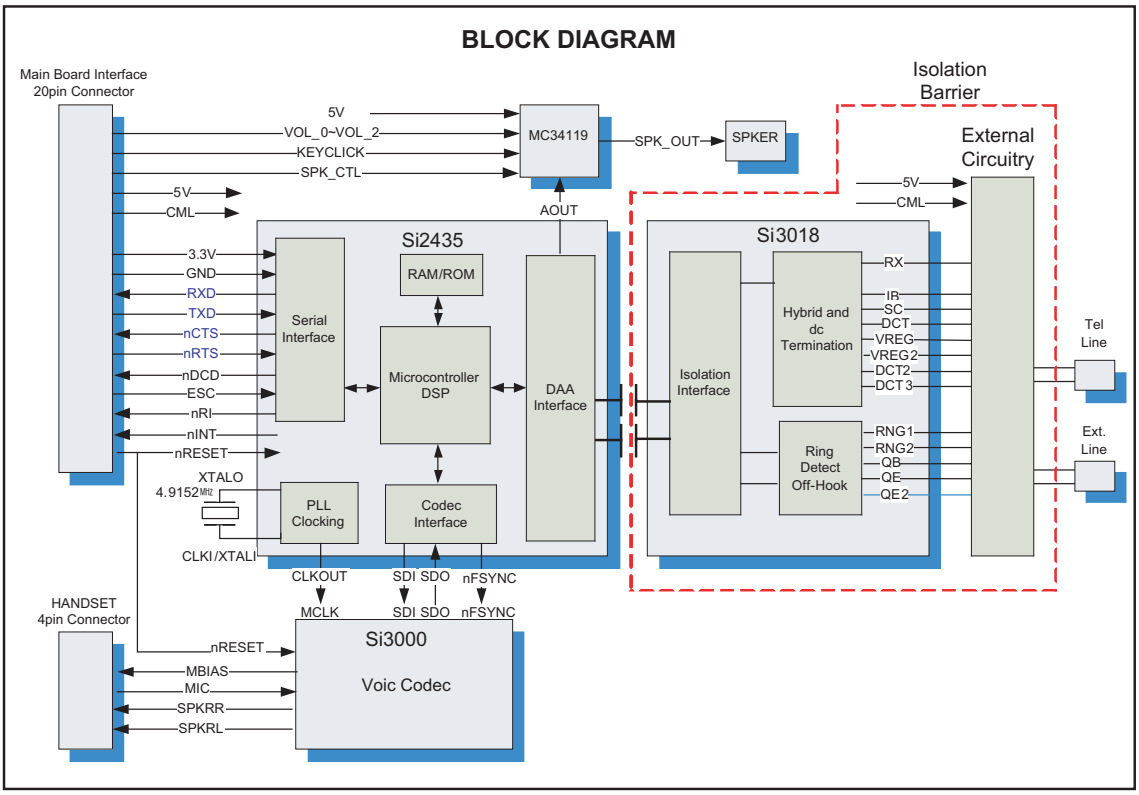
◆ IP Block Diagram



1) Scanning Device:		Color CCD (Charge Coupled Device) Module
2) Supported Operating Systems:		Windows 98/2000/NT4.0/ME/XP, MAC (English only)
3) Compatibility:		TWAIN Standard
4) Maximum Scan Width:		216mm (8.5 inches)
5) Effective Scan Width:		208mm (8.2 inches)
6) Optical Resolution:		600x1200 dpi
7) Interpolated Resolution:		Maximum 4800 dpi
8) Preview Scan:		75 dpi
9) Scan Modes/Speeds: (USB 2.0, 300dpi, Letter Size, Pentium4 2.xGHz, 128MB RAM)	ADF & DADF	- Linearity : 15 sec. (Letter, 300dpi, USB) - Gray Scale : 20 sec. (Letter, 300dpi, USB) - Color : 30 sec. (Letter, 300dpi, USB)
	Platen	- Linearity : 15 sec. (Letter, 300dpi, USB) - Gray Scale : 20 sec. (Letter, 300dpi, USB) - Color : 30 sec. (Letter, 300dpi, USB)
10) ADF & DADF Capacity:		50 sheets (20 lb)
11) Image Compression:		None
12) PC Interface:(USB & Parallel are not simultaneously supported)		USB (without HUB mode)Requires 6 ft. USB Cable (not supplied by SEC)
13) Minimum PC Specification:		Pentium-II 233MHz, 64MB RAM, 120MB free disk space
14) Registration Position for Original:		- Platen: Rear-Left Corner (when facing front/ operator panel). - ADF & DADF: Center
15) Number of Copies:		2 digits (99 maximum for LCD display and reports)

18) FAX section

◆ Block Diagram

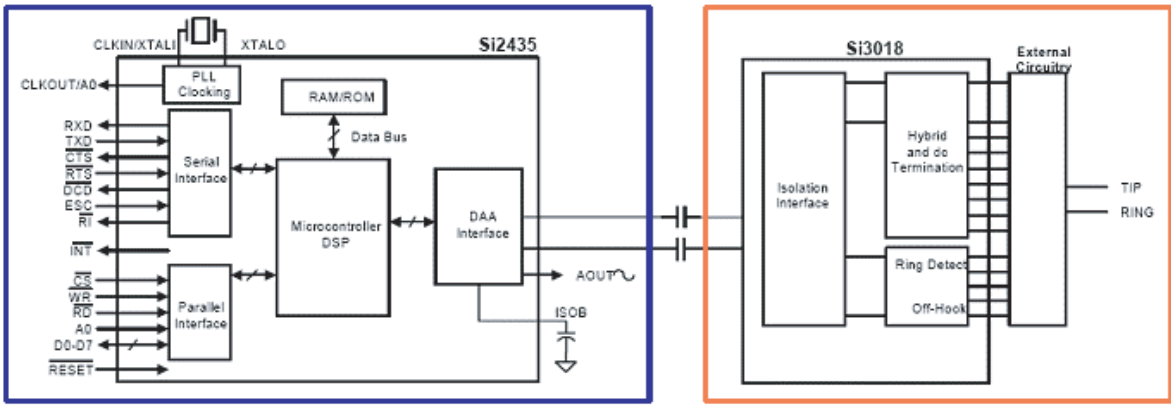


Implemented by based on the silicon DAA (Data Access Arrangement) Solution, and is roughly composed of two Chip Solution

- SI2435(SSD) A Modem Chip which embeds SSD (System Side Device) for interfacing between LSD and Voice Codec(SI3000)
- SI3018 (LSD) A LIU (Line Interface Unit) Chip which is controlled by SSD and satisfies each PSTN Requirements by modulating internal Configuration with connecting Tel Line.

◆ Signal Transition of DAA Solution

Line Interface Signal of Tel Line and LSD is Analog Signal. There are a A/D and a D/A Converter in the LSD, so Analog Signal from Tel Line is converted in Digital through a A/D Converter in the DAA and transferred to the SSD by the DIB Transformer. Digital Signal from the SSD is converted to Analog by a D/A Converter in the DAA and transferred to Tel Line.



(Modem) (Silicon DAA)

1) Modem Side

The Si2435 modem device contains a controller, a DSP, program memory (ROM), data memory (RAM), a serial and parallel interface, a crystal oscillator, and an isolation capacitor interface.
The crystal oscillator circuit requires a 4.9152MHzfundamental mode parallel-resonant crystal. Typical crystals require a 20pF load capacitance. This load is calculated as the series combination of the capacitance.
Frequency stability and accuracy are critically important to the performance of the modem. ITU-T specifications require less than 200ppm difference in the carrier frequency of two modems.
In the system there are two system interface options, serial and parallel. The serial interface allows the host processor to communicate with the modem controller through a UART driver. The system is adopted UART interface.

2) DAA Side

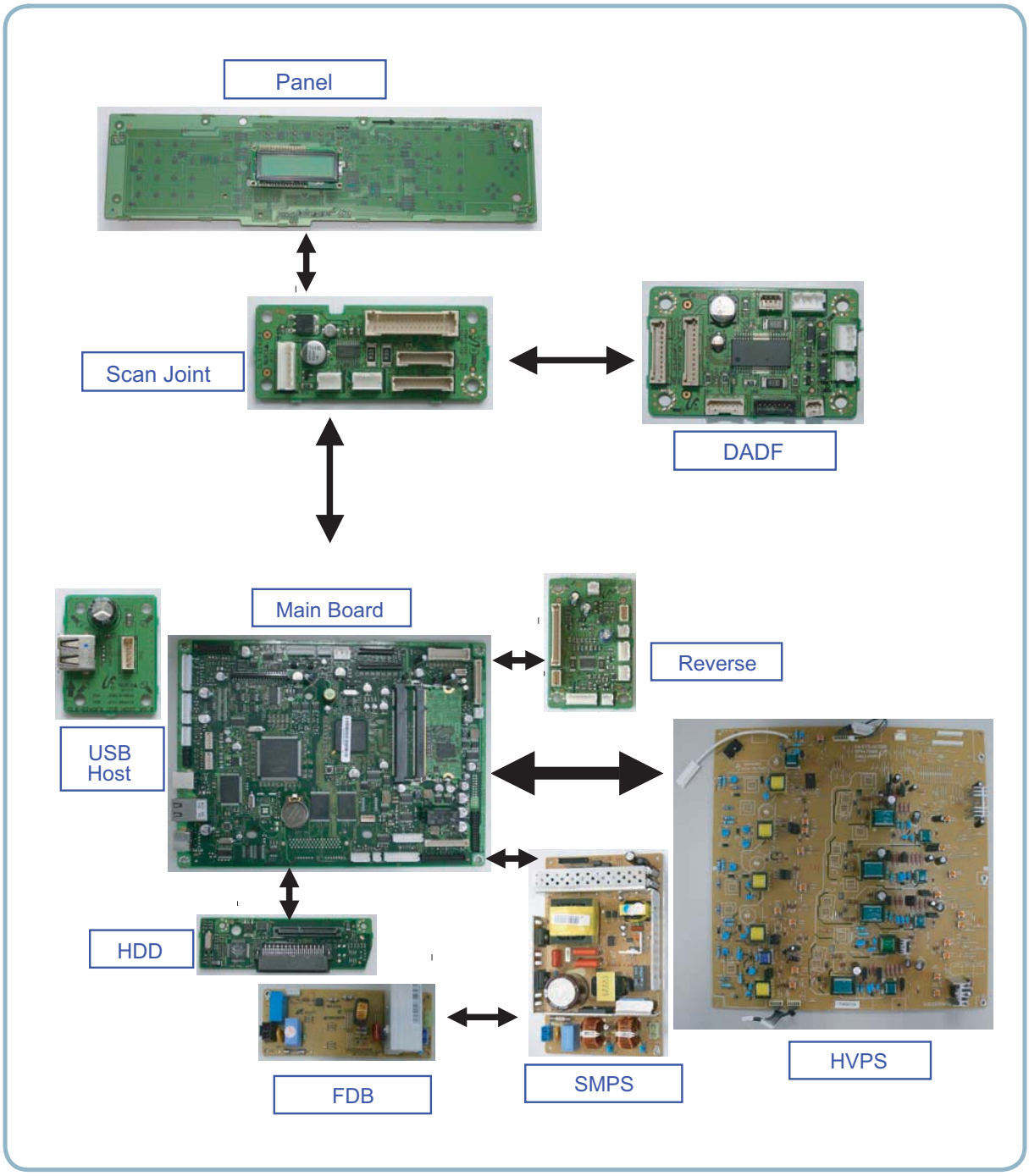
The Si3018, DAA or line-side device, contains an ADC, a DAC, control circuitry, and an isolation capacitor interface. The Si3018 and surrounding circuitry provide all functionality for telephone line interface requirement
compliance including a full-wave bridge, hook switch, dc termination, ac termination, ring detect, loop voltage/current monitoring, and call progress monitoring.

3) Speaker Driver

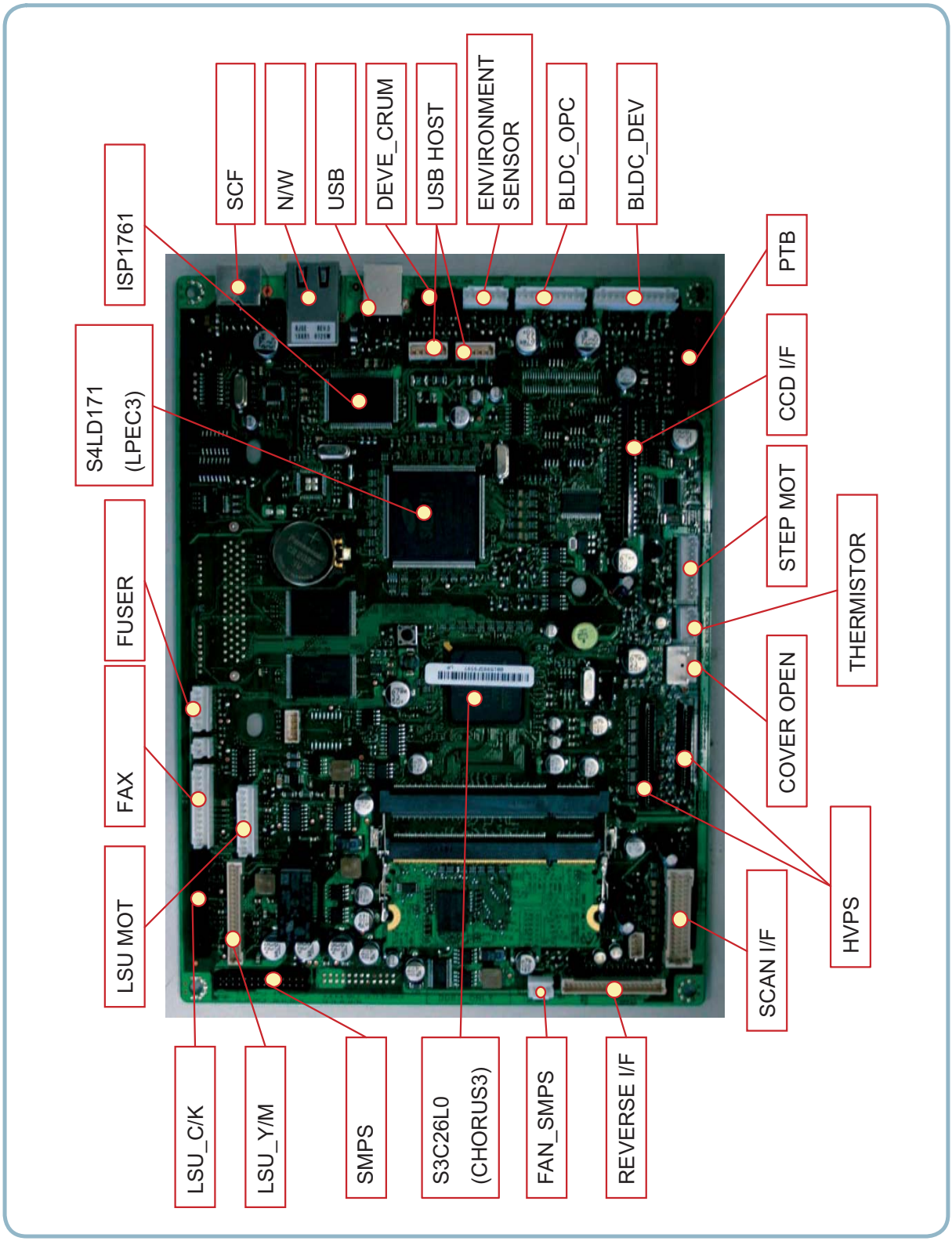
The AOUT signal from the Si2435 modem chip is only available in the serial DTE interface mode. AOUT is a 50% duty cycle, 32kHz, square wave pulse-width modulated (PWM) by voice band audio, such as cal progress tones.

Application Network	PSTN (RJ-11)
Communication Mode	Half-Duplex, ITU V.8, V.34, V.17, V.29, V.21, V.27ter, ECMModem will auto train down only.
Communication Standard	ITU-T Group 3
Max. Modem Speed	33.6 Kbps
Encoding	MH, MR, MMR, JPEG, JBIG
Transfer Rate	3 seconds (standard resolution, MMR, 33.6kbps, CCITT No.1, LTR) Phase "C" by ITU-T No.1 Chart/Memory Transmission/ECM
Fax Modes	Standard (203 x 98 dpi) Fine (203 x 196 dpi) Super Fine (300 x 300 dpi)
Fax Contrast	Adjustable 3 levels (Light/Normal/Dark)
Fax Memory	4MB (About 320 Sheets of CCITT No.1 Chart at standard resolution). User selectable parameters will be stored in NVRAM.
TX/RX Journal	Available.
Tel/ID List	Available.
Confirmation Reports for Send	Upon successful transmission Upon failure Reduced image of first page (except OHD, and partial page for complexity of the images) Customer On/Off selectable
Management Reports	Configuration Report Image TCR for Memory TX
TTI/RTI:	TTI (Transmit Terminal Identification) printed at top of Fax Image. RTI (Receiver Terminal Identification) printed at bottom of Fax Image the Transmitting devices fax number is substituted for receiving devices fax number is this footer.
Line Control Unit (LIU)	Input Sensitivity : Not programmable Output Level : -9 to -15 dBm (programmable) Cable Equalization : Not programmable Input/Output Impedance: per PTT requirements (programmable) DC Resistance: per PTT requirements (programmable) Insulation Resistance: Minimum 5M ohm
Header Transmission (Always On)	Local Machine date and time Local Machine ID Local Machine Name Transmit page count (3 digits)

2.2.2 H/W Configuration



2.2.2.1 Main Board



• Memory :
  - RAM : DDR2 Default 128MB + Option 128/256MB
  - ROM : 16MB+8MB
  - EEPROM : 64kb
• Peripherals :
  - USB 2.0
  - 10/100 Based N/W (MII Interface Phy Chip Used)
• I/O :
  - Digital I/O Port : Basic I/O, PWM : Motor & HVPS Control
  - UART : Debug, FAX, OP
  - I2C : EEPROM & SDRAM & CRUM Interface
  - Analog I/O Port (ADC : Sensor Interface, DAC : LD Power Control)

Chorus 3 Architecture

• CPU Core : ARM9266EJS 360Mhz (I-Cache : 16KB, D-Cache : 16KB)
• SDRAM Controller : 4 bank DDR1 SDRAM and 4 & 8 bank DDR2 SDRAM
(DDR2 2DIMM Used, 166MHz), 120Mhz System Bus
• ROM Controller : 2 Banks (1 Bank Used)
• I/O Controller : 4 Channel
• DMA Controller : 3 Channel
• HPVC : 4 Channel Dual / Single Beam
• UART : 4 Channels (Debug, OP, FAX 3 Channel used)
• Interrupt : 4 External, 64 Internal
• TIMER : 6 System Timer

Memory Interface

• ROM :
  - Nor Flash : 16MB(Program ROM) + 8MB(Backup Memory)
  - Serial Flash : 4MB
  - Interface With Chorus 3/SPGPXm ROM Controller
• SDRAM :
  - Size : Default 128MB (Option 128/256MB)
• EEPROM :
  - Size : 64kb
  - Interface With Chorus 3/SPGPXm I2C Controller
• CRUM :
  - Size : 256Byte
  - Interface With Chorus M I2C Controller via Deve Joint Board

I/O Interface

• High Speed USB 2.0 (High speed 480Mbps / Full speed 12Mbps)
• N/W Embedded
  - Chorus3 With MII Interface
  - Active LED(Yellow) / Link LED(Green)
• PWM
  - High Voltage Control With Duty
  - Main Motor Clock
• I2C Interface
  - NVRAM (system information + network information)
  - CRUM

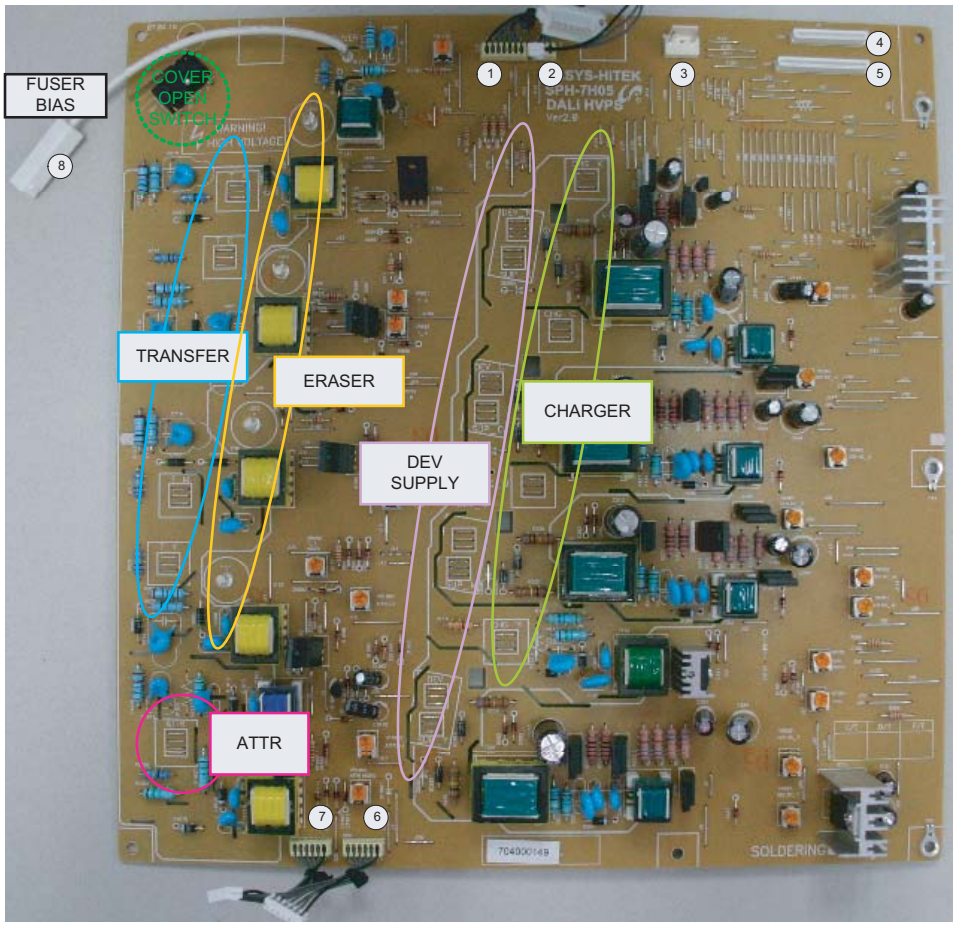
2.2.2.2 Power Flow

• SMPS
  - Type V (standard type)
  - +24V : For use Mechanical Part (Motor & Actuator (Solenoid, Clutch)), CCDM
  - +5V : Logic, Analog, Sensor

• Main B'D
  - Supply From SMPS +5V
  - Power Supply with Regulator (3.3V & 1.2V & 1.0V : Switching Regulator)
  - 3.3V : I/O Operating (Digital & Analog)
  - 1.0V : Chorus 3 Core Voltage

• HVPS
  - High Voltage Source for EP Condition
  - Supply From SMPS +24V
  - Controlled By PWM Pulse & I/O

2.2.2.3 HVPS

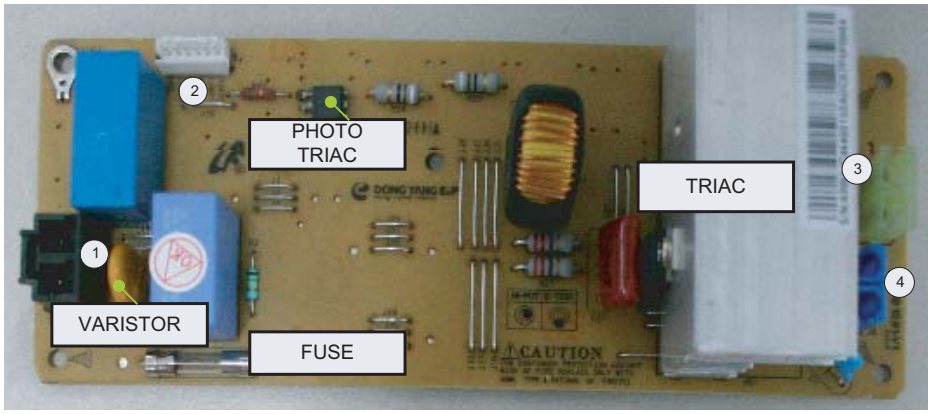


Charger : 1channel
DEV AC : 4channel
Supply DC : 4channel
ATTR+ : 1channel
ATTR- : 1channel
Transfer : 4channel
Fuser Bias : 1channel

1	PANEL
2	EXIT SENSOR
3	24V SWITCH
4	HVPS1(form mainboard)
5	HVPS2(form mainboard)
6	Feed, CST empty sensor
7	MP solenoid, MP empty, CST detect
8	Fuser bias

Output	Input Duty (EDC mode display)	Output Voltage/Current	Load	Read voltage (ADC)	Tolerance
CHARGER Y,M,C,K	169(66%)	-1170V	200M	-	3%
SUP DC Y,M,C,K	100(39%)	-295V	68pF	-	3%
DEVE AC Y,M,C,K	AC freq2.6kHz AC PWM 92(36%) AC Vpp PWM 65(25%)	174.0V (about 1740V) [AC JIG]	68pF	-	1.5%
Transfer_Y,M,C,K	97(38%)	14uA	90M	1.7V (132)	3%
ATTR	108(42%)	950V	100M	0.6V (46)	3%
ATTR[-]	on	350V	25M	-	15%
Fuser Bias	128(50%)	300V	100M	-	3%
Eraser Y,M,C,K	100(39%)	on/off (18mA ±3mA)	-	-	

2.2.2.4 Fuser Drive Board



Dell 2145cn

- Zero crossing photo triac
- 1 lamp (800W) Pulse control

1	INLET AC
2	FUSER CONTROL (from Main board)
3	FUSER AC (to Fuser lamp)
4	SMPS AC (to SMPS)

2.2.2.5 SMPS

SMPS : TYPE5
INPUT : V1-AC 110V, V2-220V
OUTPUT : 24V, 5V

1	AC from FDB
2	NC (not used)
3	24V,5V to main board

■ Input/Output connector

DC Output connector (CN3)

PIN No.	Pin Assign	Description	PIN No.	Pin Assign	Description
1	+24V1	Power	2	GND	+24V Ground
3	+24V1	Power	4	+24V1	Power
5	GND	+24V Ground	6	GND	+24V Ground
7	+24V2	Power	8	GND	+24V Ground
9	+24V2	Power	10	+24V2	Power
11	GND	+24V Ground	12	GND	+24V Ground
13	+24V3	Power	14	GND	+24V Ground
15	+24V3	Power	16	GND	+24V Ground
17	GND	+5V Ground	18	GND	+5V Ground
19	+5V1	Power	20	GND	+5V Ground
21	+5V1	Power	22	+5V1	Power
23	GND	+5V Ground	24	GND	+5V Ground
25	+5V2	Power	26	+5V2	Power
27	Standby	Signal (power save mode)	28	GND	Ground

AC Input connector (CN1)

Pin Assign	PIN No.	Description
1	AC_L	AC Input
2	AC_N	

AC Input connector (CN1)

Pin Assign	PIN No.	Description
1	AC_L	AC Input
2	AC_N	

3. Disassembly and Reassembly

3.1 General Precautions on Disassembly

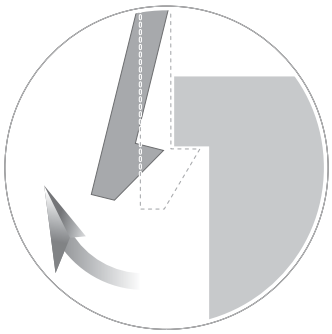
When you disassemble and reassemble components, you must use extreme caution. The close proximity of cables to moving parts makes proper routing a must.
If components are removed, any cables disturbed by the procedure must be restored as close as possible to their original positions. Before removing any component from the machine, note the cable routing that will be affected.

Whenever servicing the machine, you must perform as follows:

1. Check to verify that documents are not stored in memory.
2. Be sure to remove the toner cartridge before you disassemble parts.
3. Unplug the power cord.
4. Use a flat and clean surface.
5. Replace only with authorized components.
6. Do not force plastic-material components.
7. Make sure all components are in their proper position.

Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully.
To remove such parts, press the hook end of the latch away from the part to which it is latched.



3.2 Screws used in the printer

The screws listed in the table below are used in this printer. Please ensure that, when you disassemble the printer, you keep a note of which screw is used for which part and that, when reassembling the printer, the correct screws are used in the appropriate places.

Sec_Code	Location	Description	Qty
6003-000261	CLN BLADE	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000282	FRAME-DEV	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	7
6003-000261	CLN BLADE	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000282	FRAME-DEV	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	7
6003-000261	CLN BLADE	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000282	FRAME-DEV	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	7
6003-000261	CLN BLADE	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000282	FRAME-DEV	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	7
6003-000196	ELA UNIT-PTB SET_DUPLEX	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	10
6003-000282		SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	16
6003-000196	ELA UNIT-MAIN_FRAME	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	7
6003-000269		SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	50
6009-001396	ELA UNIT-FRAME_TOP	SCREW-SPECIAL;PH,+,-,M3,L10.3,ZPC(BLK),SWRCH18A,BTITE,-	2
6009-001492		SCREW-HEX;HWH,+,M3,L8,NI PLT,SWRCH18A,S,RF	2
6003-000196	ELA UNIT-FRAME_BOTTOM	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6009-001492		SCREW-HEX;HWH,+,M3,L8,NI PLT,SWRCH18A,S,RF	1
6003-000269	ELA UNIT-OPE_LEFT	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	ELA UNIT-FRAME_LEFT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	15
6003-000196	ELA UNIT-SUPPORT_CST_L	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	ELA UNIT-PTB_TERMINAL	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	ELA UNIT-FRAME_RIGHT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	17
6003-000269		SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	19
6003-000301		SCREW-TAPTITE;BH,+,-,S,M4,L6,ZPC(WHT),SWRCH18A,-	8
6006-001193		SCREW-MACHINE;PH,+,WSP,M3,10,ZPC(WHT),SWRCH18A,-,WD8,TEMPERED	9
6009-001396		SCREW-SPECIAL;PH,+,-,M3,L10.3,ZPC(BLK),SWRCH18A,BTITE,-	2
6003-000196	ELA UNIT-SUPPORT_CSTR	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	HOLDER-CAM OPC+BRAKET-CAM OPC	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	ELA UNIT-DUCT_FUSER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000269	ELA UNIT-FUSER DRIVE	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	7
6003-000301		SCREW-TAPTITE;BH,+,-,S,M4,L6,ZPC(WHT),SWRCH18A,-	2

Sec_Code	Location	Description	Qty
6003-000196	ELA HOU-UNIT_CASSETTE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	10
6003-000264		SCREW-TAPTITE;PWH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	MEA-COVER_CASSETTE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000261	MEA-KNOCK_UP_PLATE	SCREW-TAPTITE;BH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	MEA-GUIDE PAPER DUP	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000282	ELA UNIT-LSU	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	22
6003-000282	ELA UNIT-LSU LD	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	2
6003-000196	ELA UNIT-FUSER_HV	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	24
6003-000269		SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	6
6003-000282		SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	2
6009-001492		SCREW-HEX;HWH,+,M3,L8,NI PLT,SWRCH18A,S,RF	2
6003-000152	MICRO-SWITCH	SCREW-TAPTITE;PH,+,-,B,M2,L10,ZPC(WHT),SWRCH18A,-	2
6003-000196	BRACKET-LOCKER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	BRACKET-MID LOCK	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	6
6003-000196	BRACKET-SENSOR	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	COVER-LOCKER FRONT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	5
6003-000196	SPEAKER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	SUPPORT-MIDDLE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	USB-HOST	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000282	COVER-MIDDLE OPEN	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	2
6003-000282	PCB-REVERSE	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	4
6003-000196	MEA-COVER_FRONT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	22
6009-001492	MEA-BRACKET REAR	SCREW-HEX;HWH,+,M3,L8,NI PLT,SWRCH18A,S,RF	2
6003-000196	COVER-L/R	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	COVER-LIU	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	DAMPER-HINGE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	6
6003-000196	ELA-UNIT REVERSE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	FAN-DUCT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000196	HVPS	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	8
6003-000196	MEA-COVER REVERSE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	MEA-MIDDLE REAR	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000269	BRACKET-MAIN	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	6
6003-000269	BRACKET-REAR	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	6
6003-000269	COVER-MIDDLE	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	6
6003-000269	COVER-R/L	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000269	FUSER-BD	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	4
6003-000269	LIU-BD	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000269	LSU	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	5

Sec_Code	Location	Description	Qty
6003-000269	MAIN-BD	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	4
6003-000269	MEA-COVER REVERSE	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000269	SMPS	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	4
6003-000269	ELA UNIT-BRACKET_MAIN	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	8
6003-000301		SCREW-TAPTITE;BH,+,-,S,M4,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	MOTOR BRKT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000196	MOTOR BRKT + GROUND	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000269	ELA UNIT-MOTOR BRKT	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000196	COVER-BOTTOM REV	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	COVER-MIDDLE INLET	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	GROUND BOTTOM	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	GROUND REAR	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	SOLENOID	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	ELA HOU-OPE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	9
6003-000196	ADF ASSY + COVER PLATEN	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	6
6003-000196	ADF UPPER + ADF LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	COVER-ADF LOCK PL	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	DRAWER CONNECTOR + COVER ADF CONNECTOR	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	HINGE + COVER PLATEN	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	6
6003-000269	COVER CLUTCH + BRACKET GEAR	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000269	HARNESS GND + ADF MOTOR ASSY	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000269	MOTOR ADF + BRACKET GEAR	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000196	HARNESS ADF GND + GND ROLLE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	HARNESS ADF GND/HARNESS ADF UPPE+GND ADF	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	PBAADF + ADF LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000269	WHITE BAR + GROUND HARNESS	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	MEA-COVER PLATEN	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000196	ELA HOU-PLATEN	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	COVER-OUTBIN	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	ELA HOU-SCAN LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	7
6003-000282	ELA UNIT-CCDM MIDDLE	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SWRCH18A,-	10
6003-000269	ELA HOU-SCAN MOTOR	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6002-000440	MEA-SCAN UPPER	SCREW-TAPPING;PWH,+,-,2,M3,L8,ZPC(BLK),SWRCH18A,-	2
6003-000196		SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1

3.3 Disassembly Procedure

The description of disassembly and reassembly in this manual is listed according to the disassembly procedures.

3.3.1 COVER Rev Exit & COVER L/R

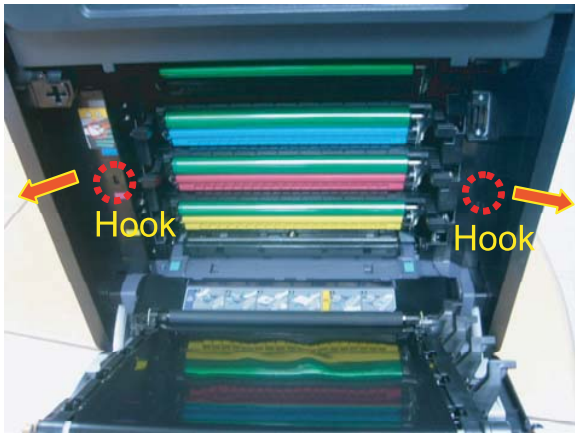
1. Remove the three screws.Remove the Cover Rev Exit Ass'y.

2. Remove the two screws.

3. Remove the two screws.

4. Remove the two screws.Unlatch the two hooks before remove the COVER L/R

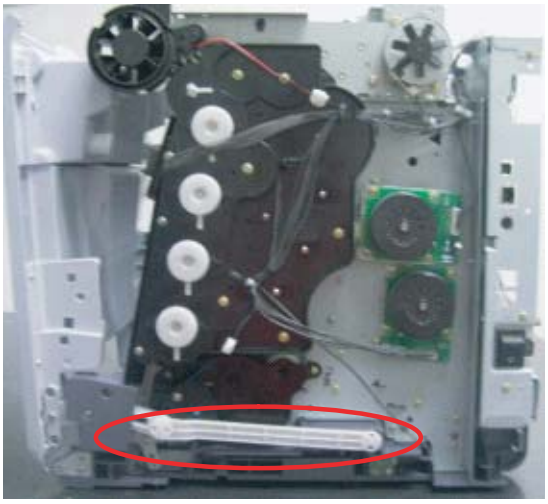
5.Push the hook with any tool, Release the Cover L/R from the SET in the direction of arrow.
(Cover L: unplug fan harness)

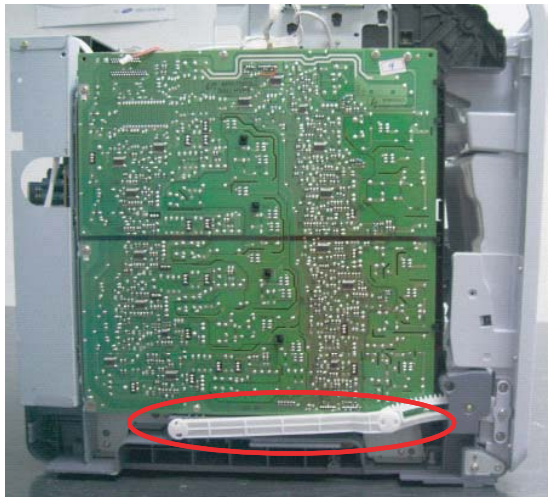


6. Done.

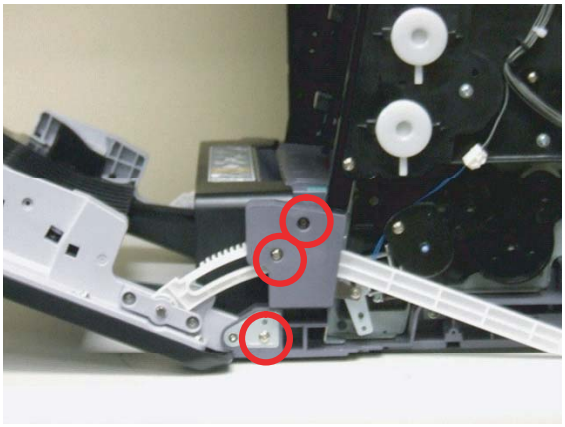
3.3.2 Cover Front Ass'y

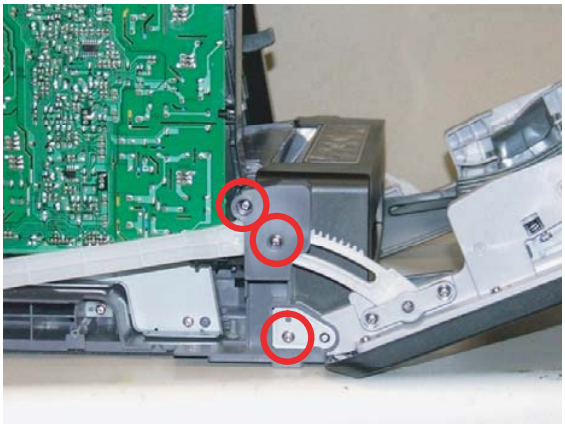
1. Release the L/R link.





2. Remove the 6 screws from both side. And remove the right/left Hinge Cover.

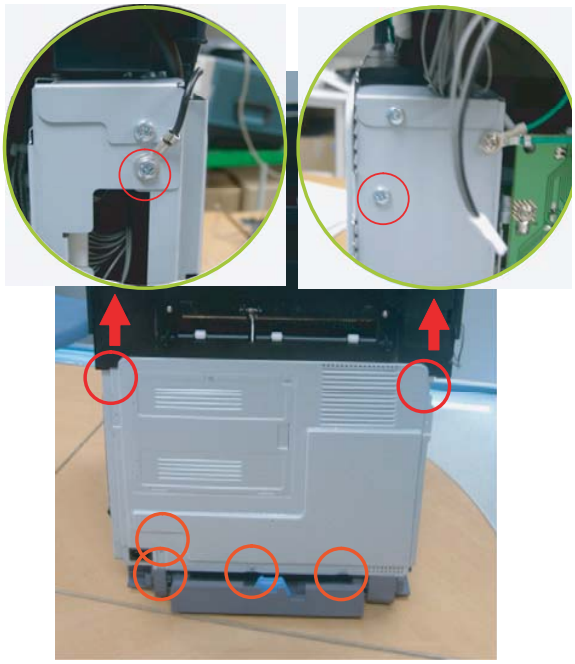




3. Use a thin, less than 2 mm flat-blade screw driver in the upper left hand corner of the hinge, push the screwdriver towards the printer to push the hinge out of the printer.

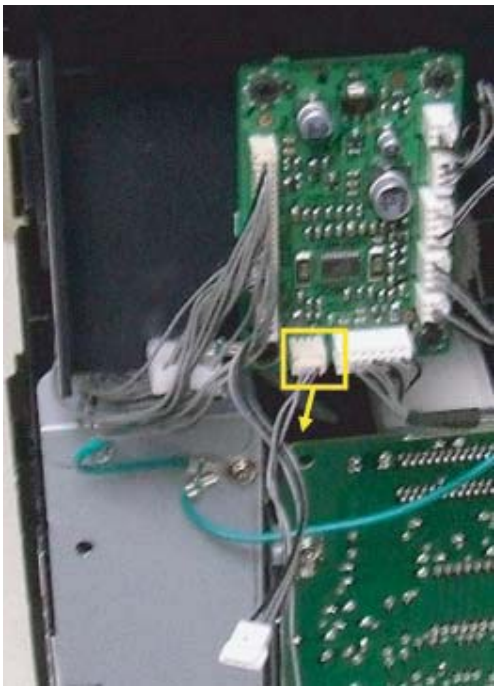
3.3.3 COVER REAR & COVER MIDDLE REAR

1. Remove the six screws.Pull the Cover Rear.



2. Remove the 2 screws. Pull the Cover Middle Rear.

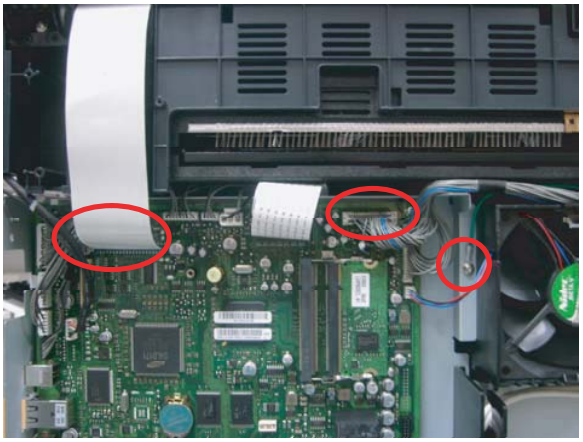
3. Unplug the connector.(3 pin)



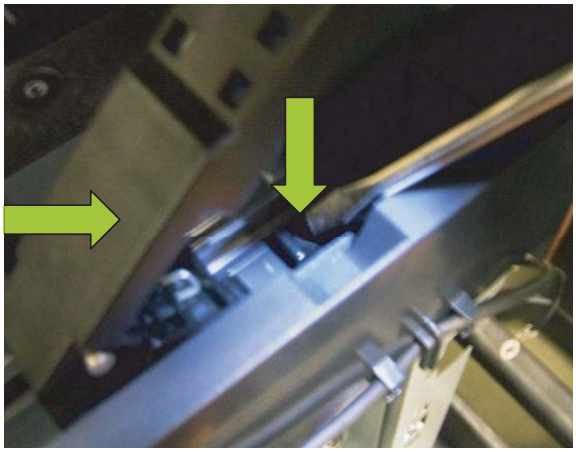
4. Done.

3.3.4 SCAN Ass'y

1. Unplug the two harness from the Main BD, Remove the one screw and Release the one Ground harness.



2. Push down on the black wedge using a Flat-head screwdriver, and push the scan assembly arm back.

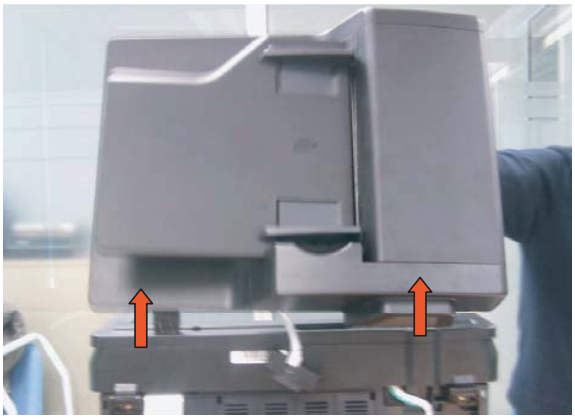


3. Pull the Scanner from the SET in the direction of arrow

3.3.5 DADF

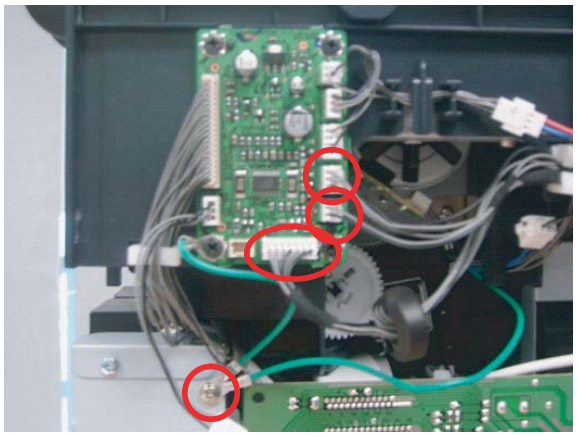
1. Disassemble the cover-connector in the indicated direction.

2. Pull the DADF from the SET in the direction of arrow.

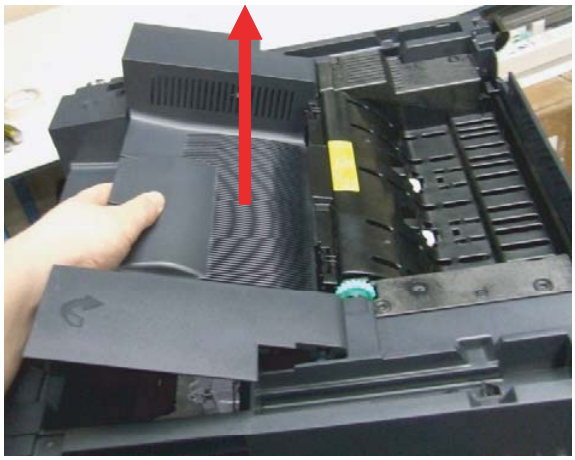


3.3.6 Reverse Ass'y

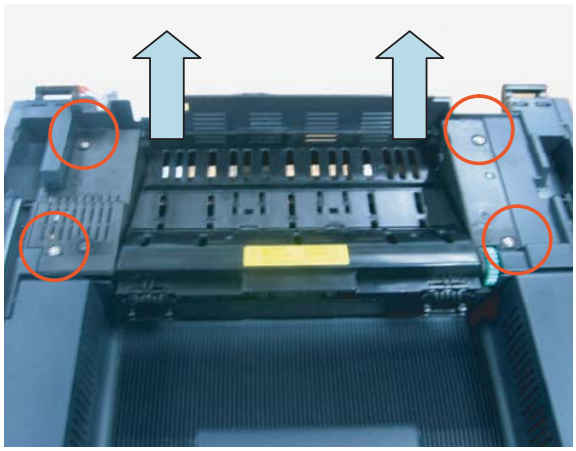
1. Unplug the three harness from the Reverse Joint BD, Remove the one screw and Release the one Ground harness.



2. Remove the 4 screws. Pull the Cover Middle Open.Pull the Reverse Ass'y from the SET in direction of arrow.



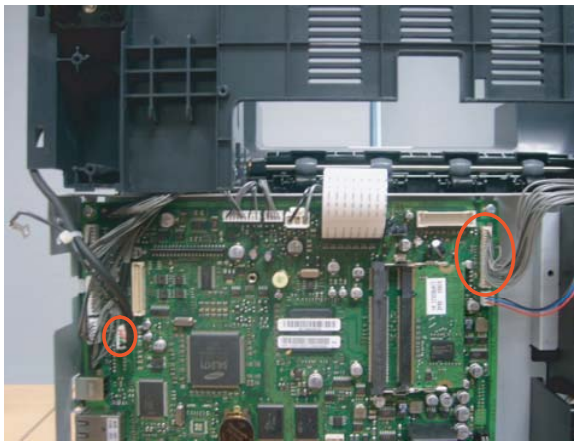
3. Remove the 4 screws. Pull the Reverse Ass'y from the SET in direction of arrow.



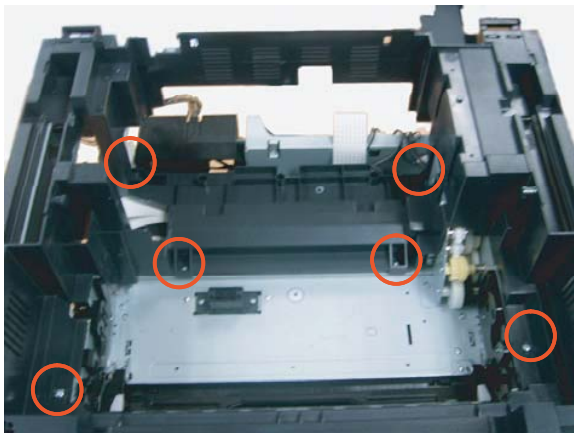
4. Done.

3.3.7 COVER MIDDLE Ass'y

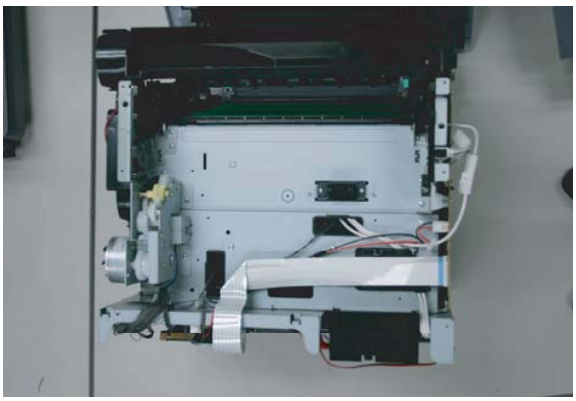
1. Unplug the three harness from the Main BD.



2. Remove the six screws.Pull the Cover Middle Ass'y from the SET in direction of arrow.

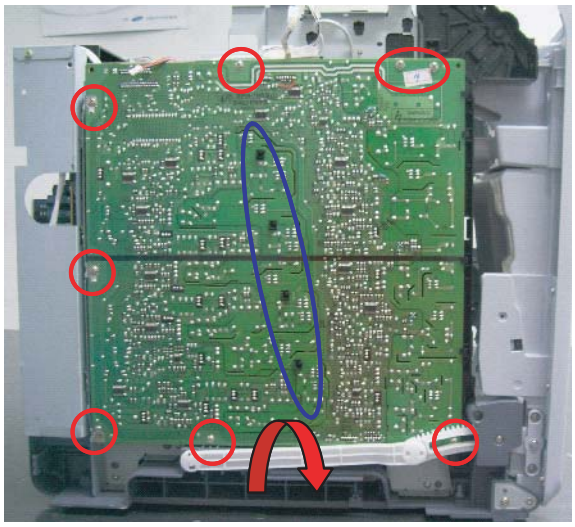


3. Done.

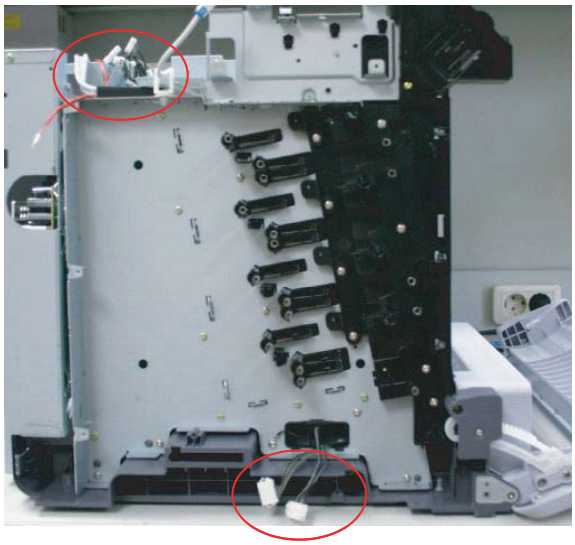


3.3.8 HVPS

1. Remove 8 screw and unlatch 4 hook after remove left side cover



2. Take out the HVPS. And unplug the two cables at the bottom and 5 cables (including 2 flat cable)

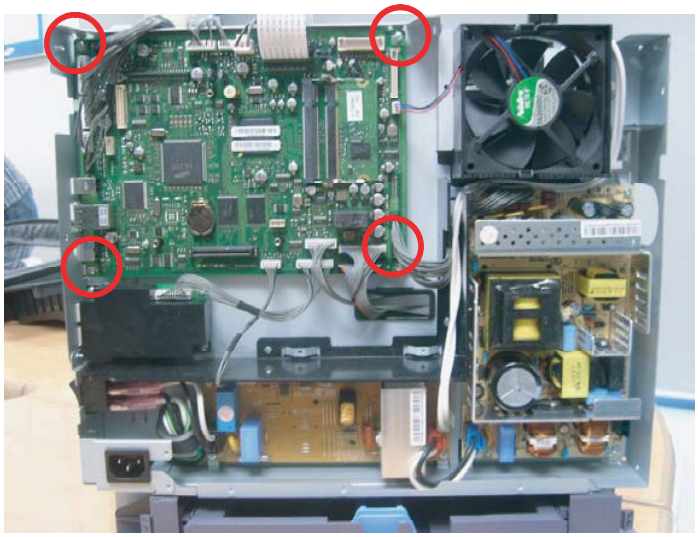


NOTE - Be careful of taking out the HVPS because there are 16 High Voltage Terminal behind HVPS.

3.3.9 Main Board

1. Unplug the connectors and all the harness

2. Pull the MAIN BD after remove the 4 screws.



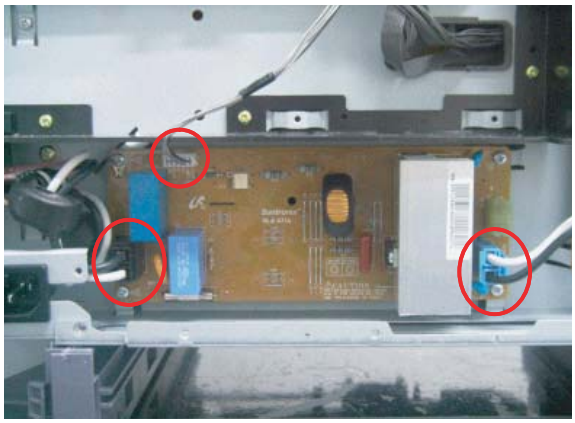
3.3.10 SMPS Board

1. Unplug the Harness, as shown below.

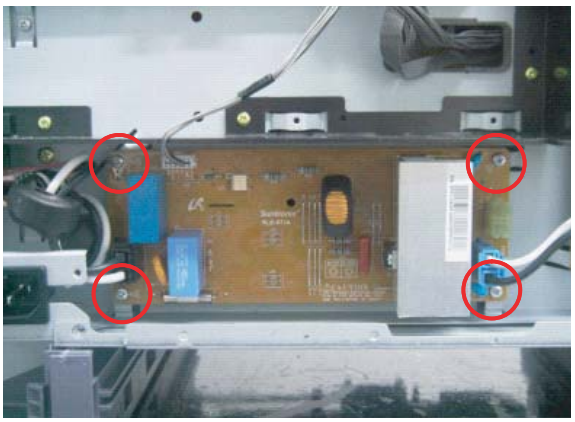
2. Remove the 4 screws, and release the SMPS Board from the SET.

3.3.11 Fuser Control Board

1.Unplug the Harness.

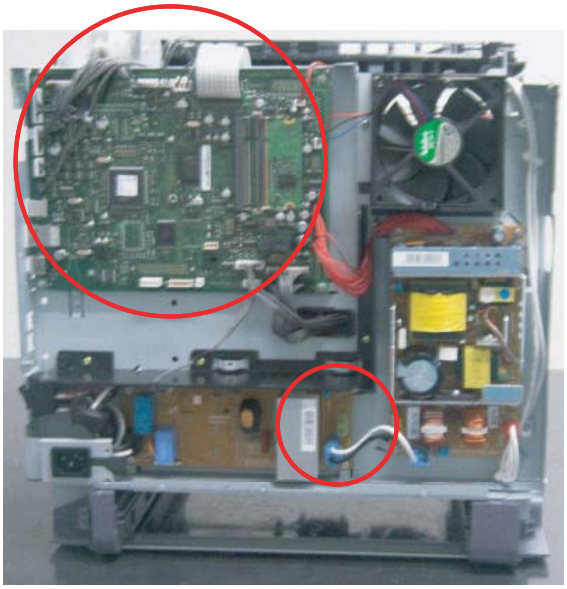


2. Remove the 4 screws, and release the Fuser control board from the SET.

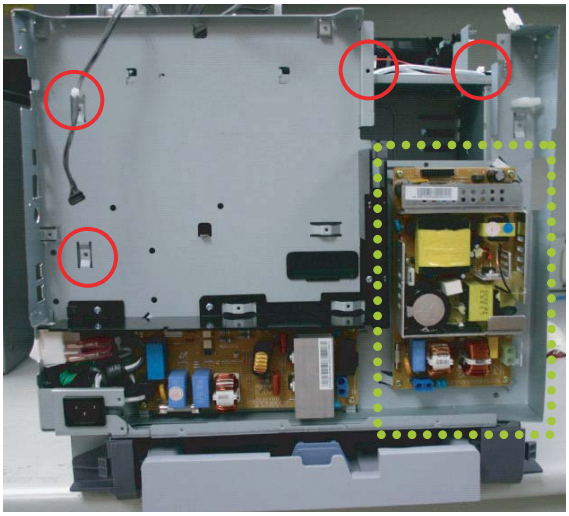


3.3.12 LSU

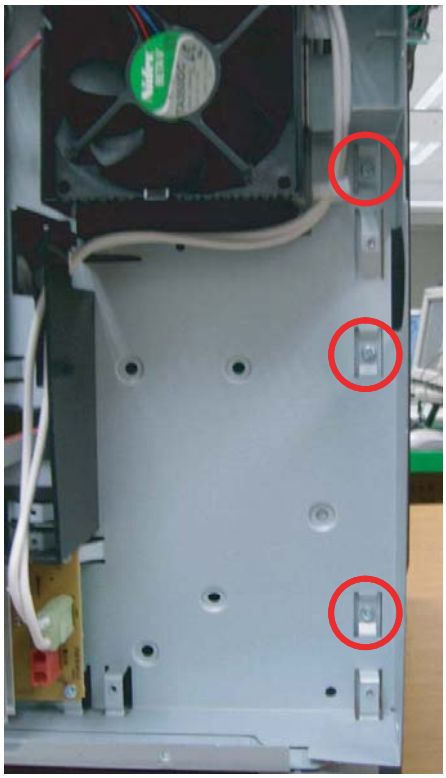
1. Remove the main board after unplug connectors and all harness



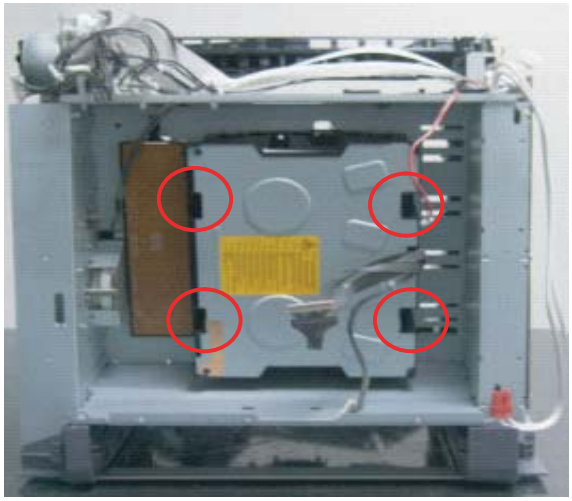
2. To remove the Main Bracket assembly , remove 4 screws and SMPS board.



3. Remove the 3 screws. And remove the Main Bracket Assembly.

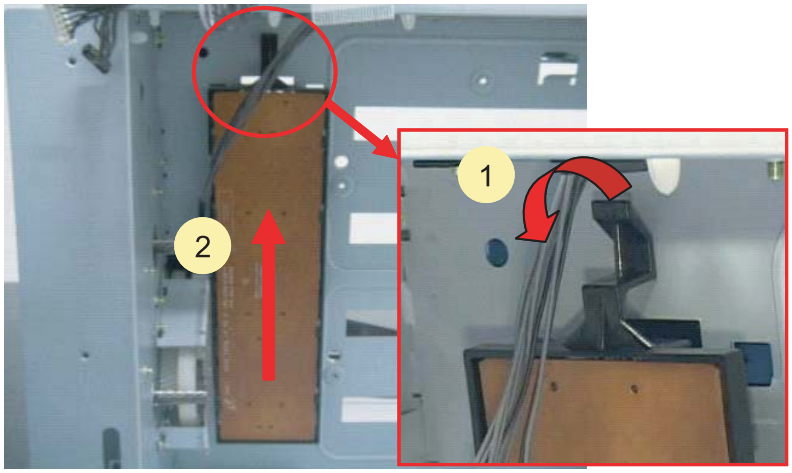


4. Pull the LSU after remove 4 screw.



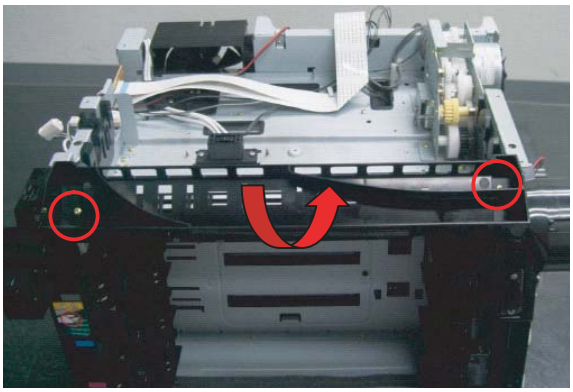
3.3.13 CRUM

1. Remove the CRUM after unlatch the lever.

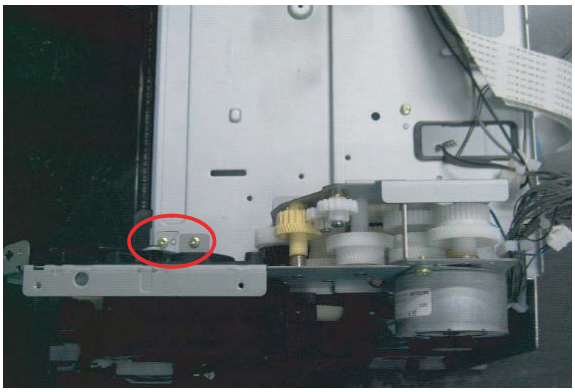


3.3.14 Fuser Drive Ass'y

1. Remove the Duct fuser after remove the 2 screw.

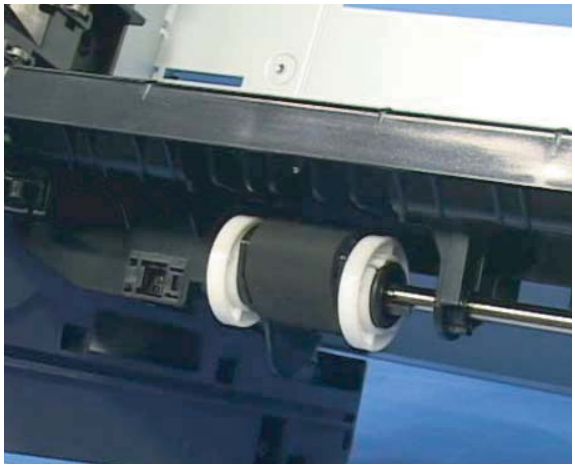


2. Pull the Fuser Drive assembly after remove 5 screw and unplug connector.



3.3.15 Pick up roller

1. Remove the Pick up roller.

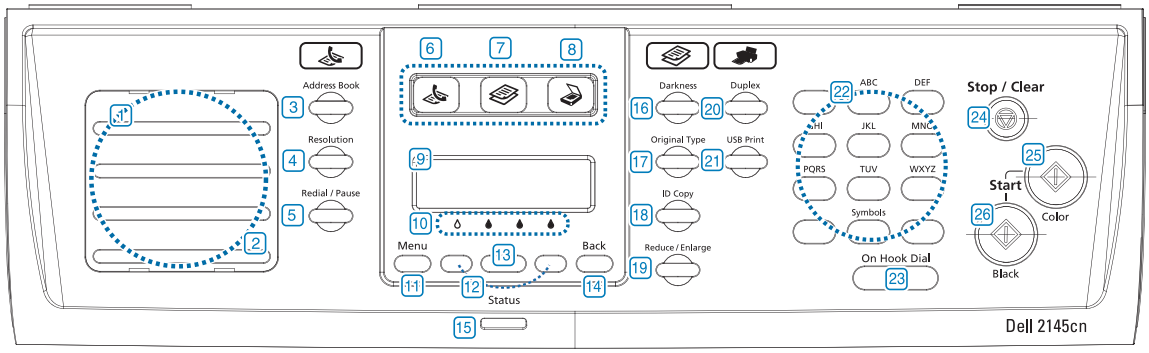


4. Alignment and Troubleshooting

This chapter describes some of the main service procedures including:
Using the Tech mode; Clearing paper jam and test patterns.
• Tips for avoiding paper jams, Clearing paper jams.
• Solving other problems.

4.1 Alignment and Adjustments

4.1.1 Control Panel overview



1	**Speed buttons**	Allows you to store frequently-dialed fax numbers and enter them with the touch of a few buttons.
2	**Shift**	Allows you to shift the speed buttons to access numbers 16 through 30.
3	**Address Book**	Allows you to store frequently used fax numbers in memory or search for stored fax numbers or email addresses.
4	**Resolution**	Adjusts the document resolution for the current fax job.
5	**Redial/Pause**	In ready mode, redials the last number, or in Edit mode, inserts a pause into a fax number.
6	**Fax**	Activates Fax mode.
7	**Copy**	Activates Copy mode.
8	**Scan/Email**	Activates Scan mode.
9	**Display**	Shows the current status and prompts during an operation.
10	**Toner colors**	The toner colors shown below the LCD display co-works with the display messages.
11	**Menu**	Enters Menu mode and scrolls through the available menus.
12	**Left/right arrow**	Scroll through the options available in the selected menu, and increase or decrease values.
13	**OK**	Confirms the selection on the screen.
14	**Back**	Sends you back to the upper menu level.
15	**Status**	Shows the status of your machine.
16	**Darkness**	Adjusts the document brightness for the current copy job.
17	**Original Type**	Selects the document type for the current copy job.
18	**ID Copy**	You can copy both sides of the ID Card like a driver's license to a single side of paper.

19	**Reduce/Enlarge**	Makes a copy smaller or larger than the original.
20	**Duplex**	Allows you to print documents on both sides of the paper.
21	**USB Print**	Allows you to directly print files stored on a USB Memory device when it is inserted into the USB memory port on the front of your machine.
22	**Number keypad**	Dials a number or enters alphanumeric characters.
23	**On Hook Dial**	Engages the telephone line.
24	**Stop/Clear**	Stops an operation at any time. In ready mode, clears/cancels the copy options, such as the darkness, the document type setting, the copy size, and the number of copies.
25	**Color Start**	Starts a job in Color mode.
26	**Black Start**	Starts a job in Black and White mode.

4.1.2 Understanding The Status LED

The color of the Status LED indicates the machine's current status.

Status		Description
Off		• The machine is powered off-line. • The machine is in power save mode. When data is received, or any button is pressed, it switches to on-line automatically.
Green	Blinking	• When the green LED slowly blinks, the machine is receiving data from the computer. • When the green LED rapidly brinks, the machine is printing data.
	On	• The machine is powered on and can be used.
Red	Blinking	• A minor error has occurred and the machine is waiting for the error to be cleared. • The toner cartridge is low. Order a new toner cartridge. You can temporarily improve print quality by redistributing the toner.
	On	• A problem has occurred such as a paper jam, cover is open or no paper in the tray, so that the machine cannot continue the job. • The toner cartridge is empty, exhausted, or needs to be changed.

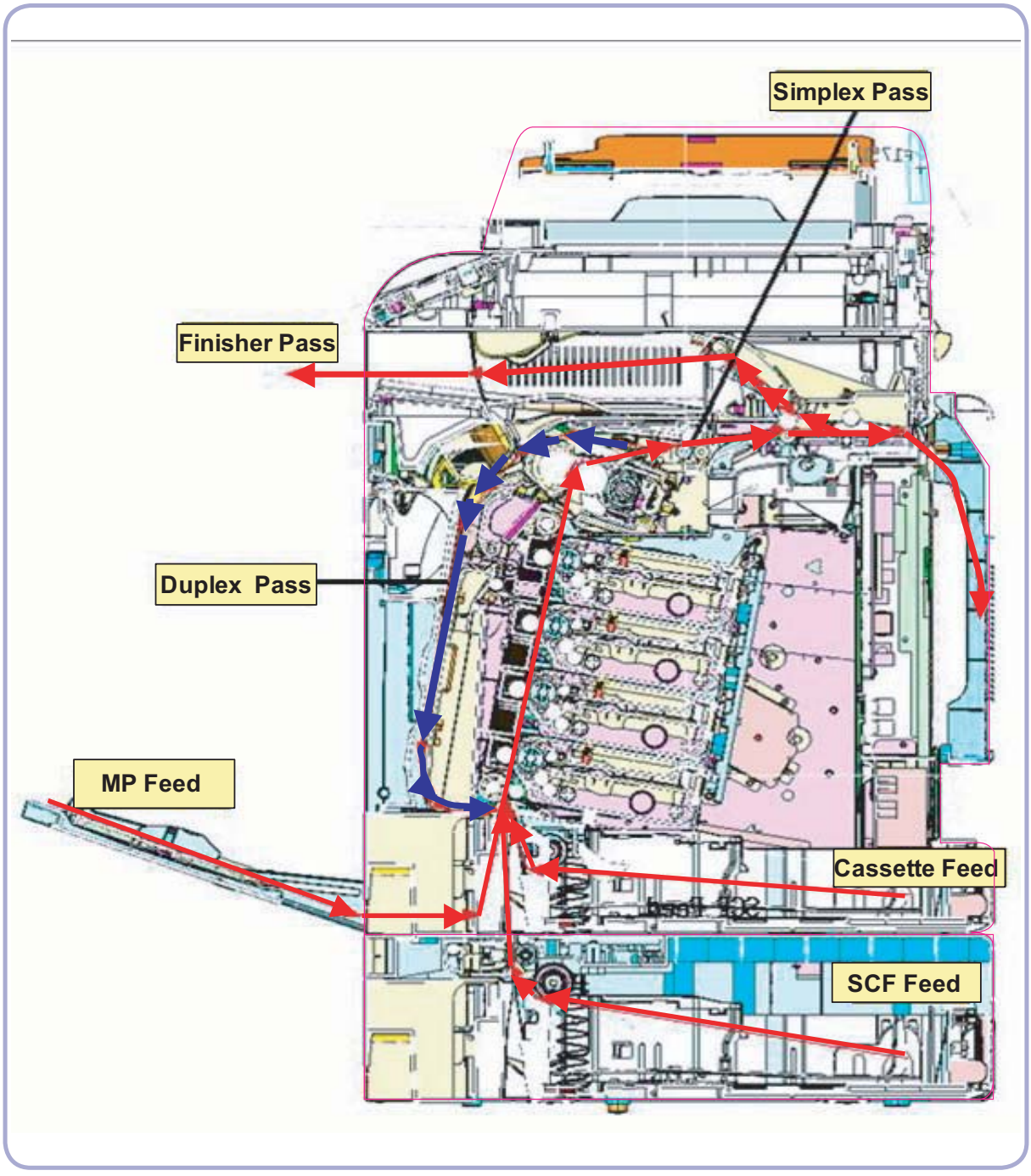
4.1.3 Jam Removal

■ Clearing paper jams

When a paper jam occurs, the warning message appears on the display screen. Refer to the table below to locate and clear the paper jam.

MESSAGE	LOCATION OF JAM
MP Tray Paper Jam 0	In the multi purpose tray
Tray 2 Paper jam 0	In the optional tray
Paper Jam 0 Open/Close Door	In the paper feed area and inside the machine
Paper Jam 1 Open/Close Door	Inside the machine
Paper Jam 2 Check Inside	Inside the machine and in the fuser area
Reverse Jam 0 Check Inside	In the fuser area and in the cover of reverse unit area
Reverse Jam 1 Check Inside	In the rear cover and in the cover of reverse unit area
Remove Paper in Rear Cover	Inside rear cover
Duplex Jam 0 Check Inside	Inside the machine
Duplex Jam 1 Open/Close Door	In the paper feed area and inside the machine

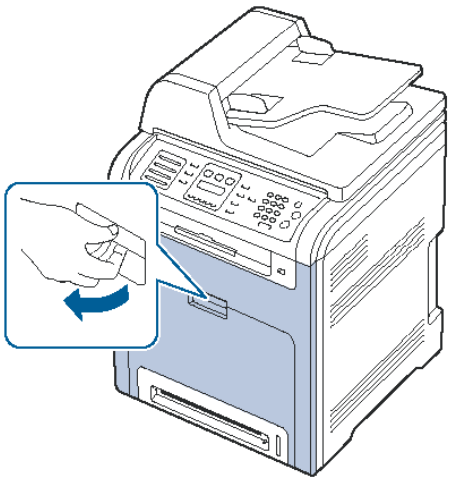
■ Paper Path


Simplex Pass
Finisher Pass
Duplex Pass
MP Feed
Cassette Feed
SCF Feed

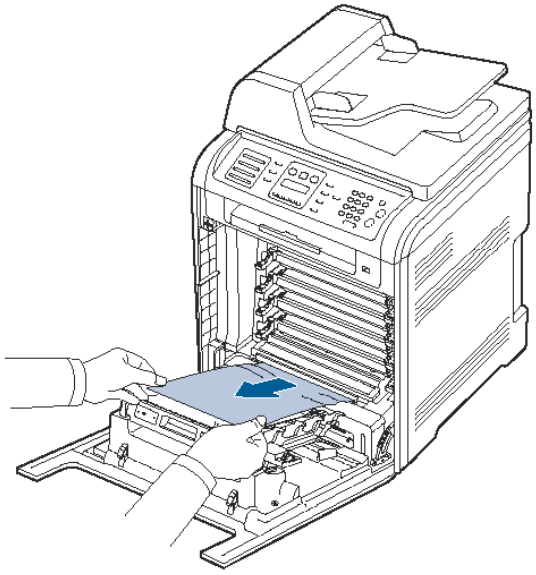
4.1.3.1 In the paper feed area

If paper is jammed in the paper feed area, follow the next steps to release the jammed paper.

1. Using the handle, completely open the front cover.



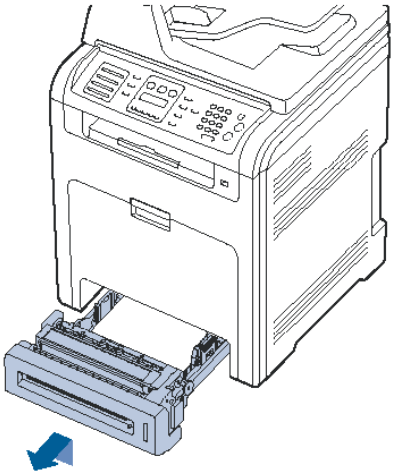
2. Carefully remove the paper by pulling in the direction as shown below.



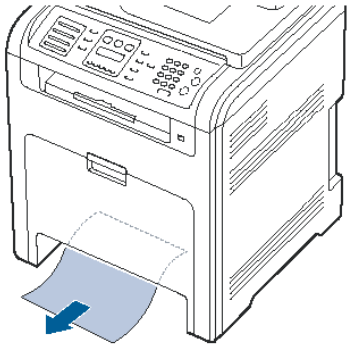
If you cannot find the jammed paper, or if there is any resistance removing the paper, stop pulling, and go to step 3.

3. Close the front cover.

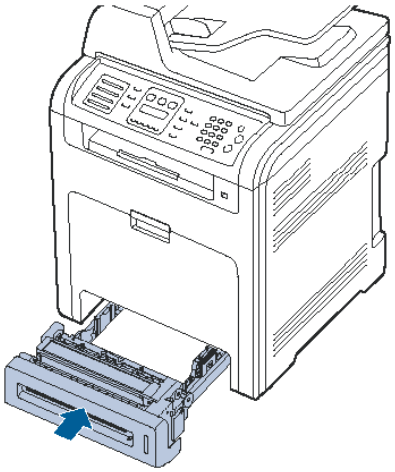
4. Pull the tray open.



5. Remove the jammed paper by gently pulling it straight out as shown below.



6. To replace the tray, lower the rear edge, align it with the slot, and slide it into the machine.

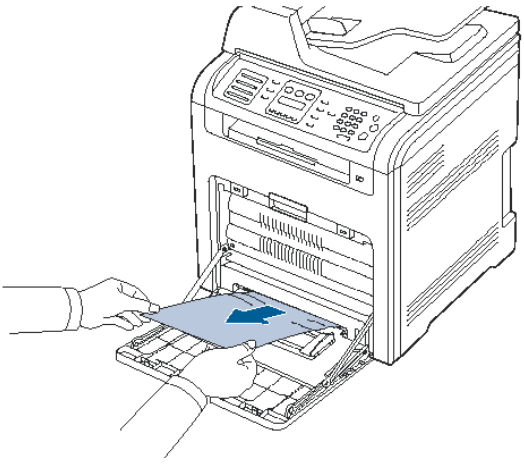


7. Open the front cover and close it. The machine will resume printing.

4.1.3.2 In the multi-purpose tray

When you print using the Multi-purpose Tray and the machine detects that there is either no paper or the paper has been improperly loaded, follow the next steps to release the jammed paper.

1. Check if the paper is stuck in the feeding area, and if so, pull it out gently and slowly.

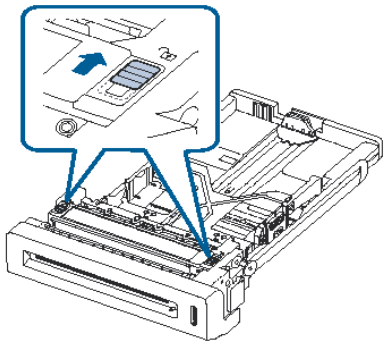


If you cannot find the jammed paper, or if there is any resistance removing the paper, stop pulling and go to step 2.

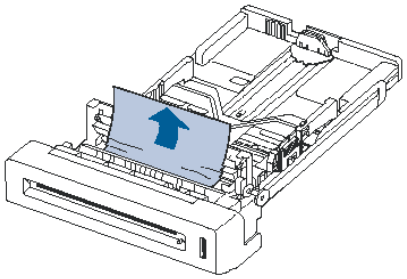
2. Close the multi-purpose tray.

3. Pull the tray out.

4. Open the inner cover while you are pushing the lever with two hands.

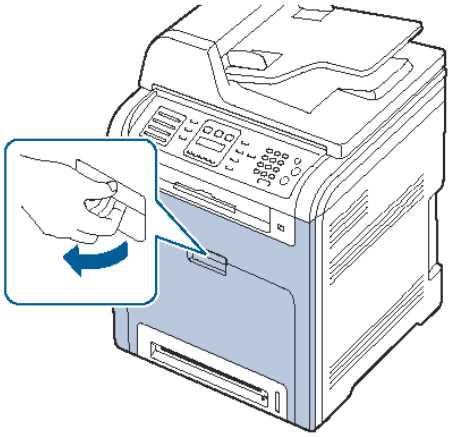


5. Pull the paper out gently.

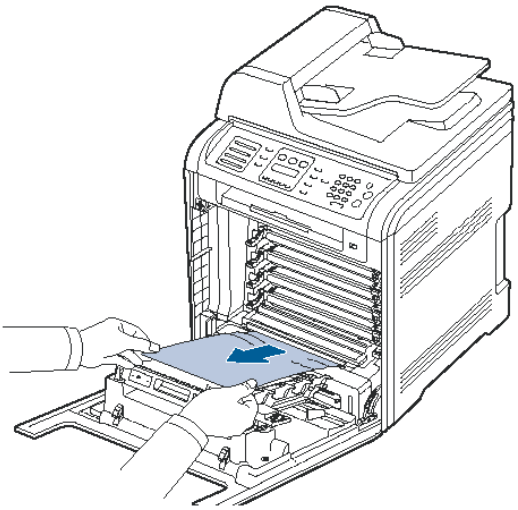


6. Replace the tray.
   If you cannot find the jammed paper, or if there is any resistance removing the paper, stop pulling and go to step 8.

7. Using the handle, completely open the front cover.



8. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.

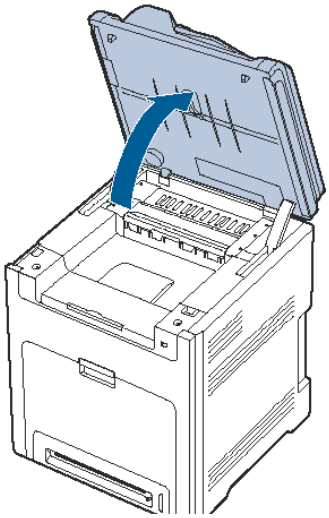


9. Close the front cover firmly. The machine will resume printing.

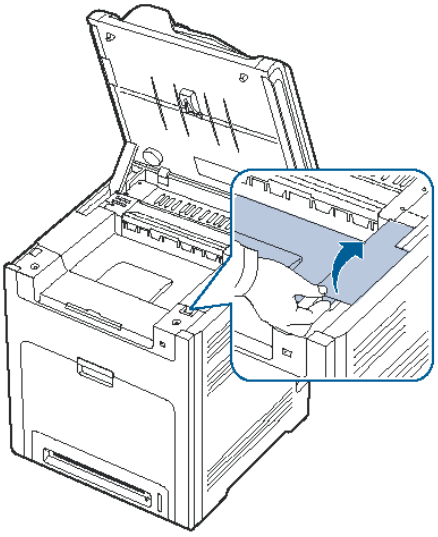
4.1.3.3 In the fuser unit area

If paper is jammed in the fuser unit area, follow the next steps to release the jammed paper.

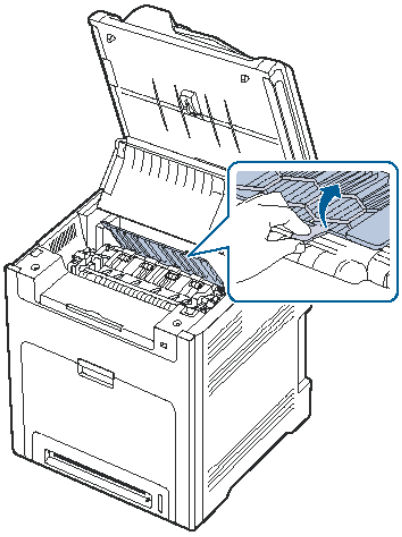
1. Open the top cover.



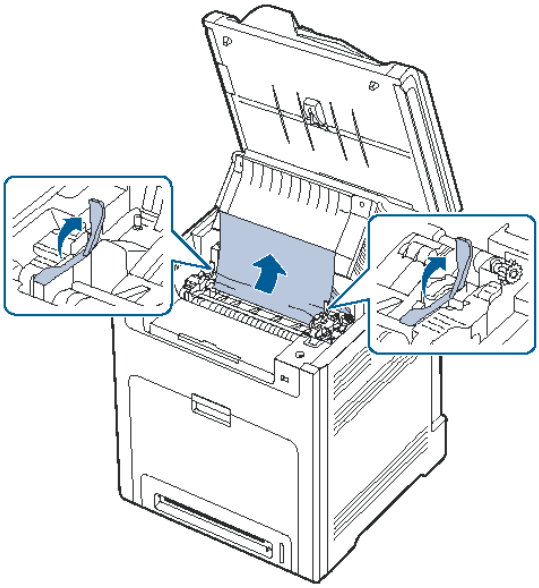
2. Open the inner cover using the handle.



3. Open the inner cover using the handle on it and carefully take the jammed paper out of the machine.



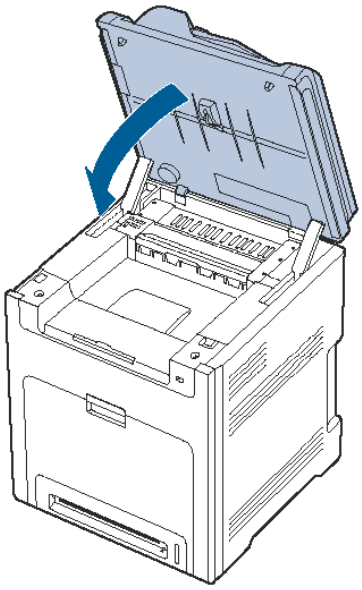
4. Pull up the paper jam lever to loose the fusing part of the fuser unit and carefully take the jammed paper out of the machine.



5. Press down the paper jam lever to fasten the fusing part.

6. Close the inner cover.

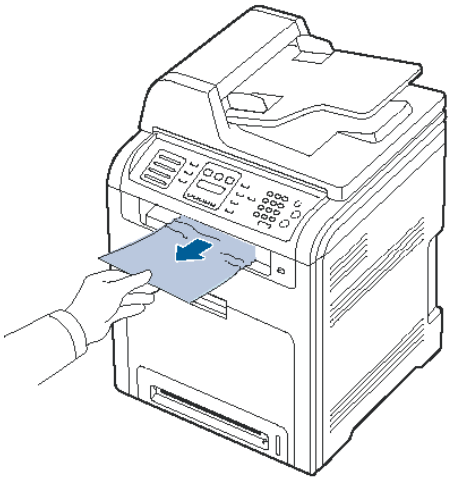
7. Lowering down the scan unit gently and slowly until it is completely closed. Make sure that it is securely latched. Be careful not to pinch your fingers!



4.1.3.4 In the paper exit area

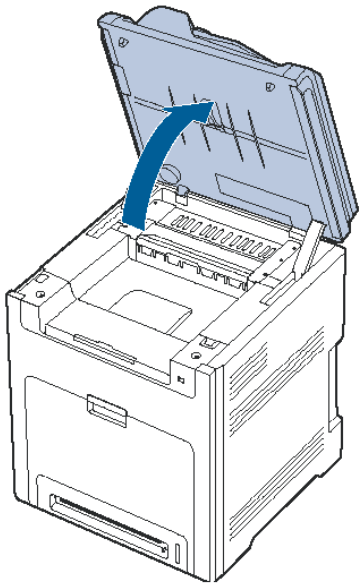
If paper is jammed in the paper exit area, follow the next steps to release the jammed paper.

1. If a long portion of the paper is visible, pull it straight out. Open and close the front cover firmly. The machine will resume printing.

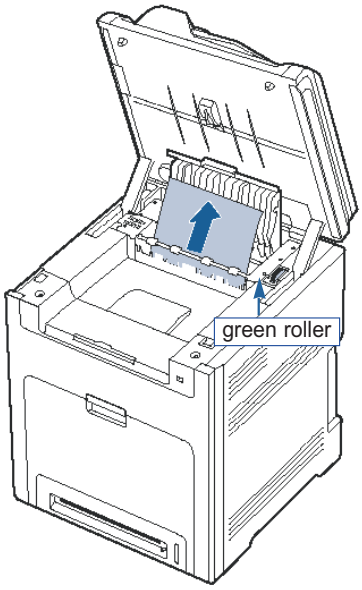


If you cannot find the jammed paper, or if there is any resistance removing the paper, stop pulling and go to step 2.

2. Open the scan unit.



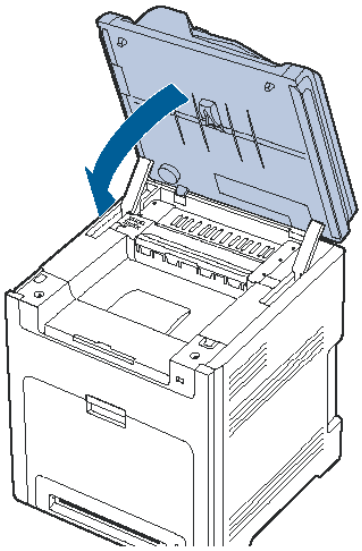
3. Open the cover of reverse unit using the handle on it and carefully take the jammed paper out of the machine.



Pull the jammed paper out of the machine.
If there is any resistance removing the paper or difficulty picking up jammed paper, stop pulling and turn the release knob to the direction as shown to remove the misfed paper.
You can turn the exit roller easily by turning the indicated green roller.

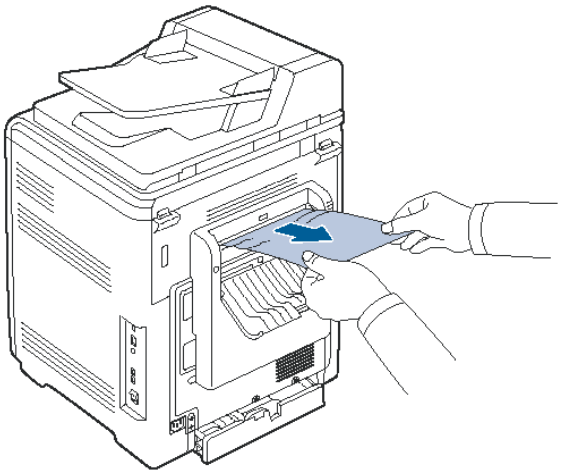
4. Close the cover of reverse unit.

5. Lowering down the scan unit gently and slowly until it is completely closed. Make sure that it is securely latched.
   Be careful not to pinch your fingers!



   If you cannot find the jammed paper, or if there is any resistance removing the paper, stop pulling and go to step 6.

6. After removing the jammed paper, check for paper which may be jammed in other parts of the machine.

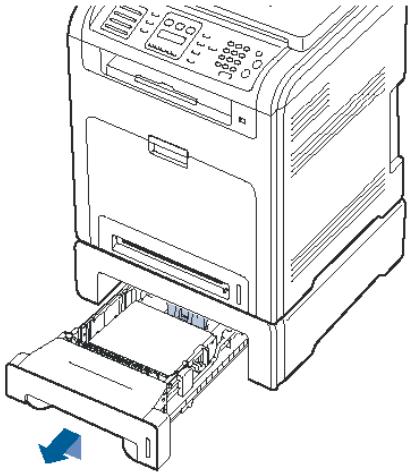


7. Close the rear cover.

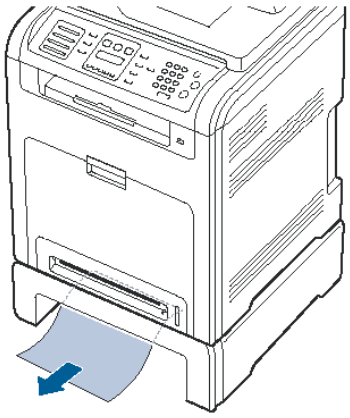
4.1.3.5 In the optional tray

If paper is jammed in the optional Tray, follow the next steps to release the jammed paper.

1. Pull the optional Tray open. After you pull it all the way out, lift up the front part of the tray slightly to release the tray from the machine.

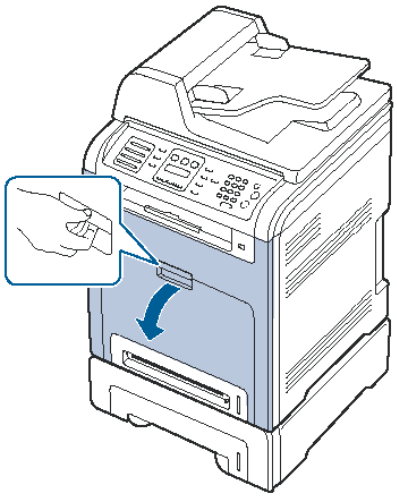


2. If you see the jammed paper, remove the paper from the machine by gently pulling it straight out as shown below.

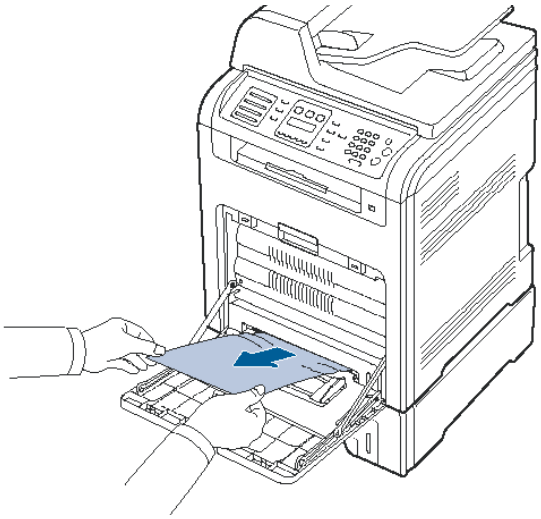


3. Slide the tray back into the machine and close the two jam covers.

4. Open the front cover.



5. Pull the jammed paper out in the direction shown. To avoid tearing the paper, pull it out gently and slowly.



6. Close the front cover firmly. The machine will resume printing.

4.1.4 System setup

4.1.4.1 Accessing to menus

The next steps are the example to print the menu map of this machine, and they are the general way to select menu and configure your machine.

1. Make sure your machine is properly connected all the necessary cables, and turn on the machine.

2. Press the Menu button until you see the menu (ex. Information) you want on the bottom line of the display.

3. Press the Enter button to access the menu.

4. Press the Left/right arrow buttons until the menu item (ex. Menu Map) you want displays on the bottom line.

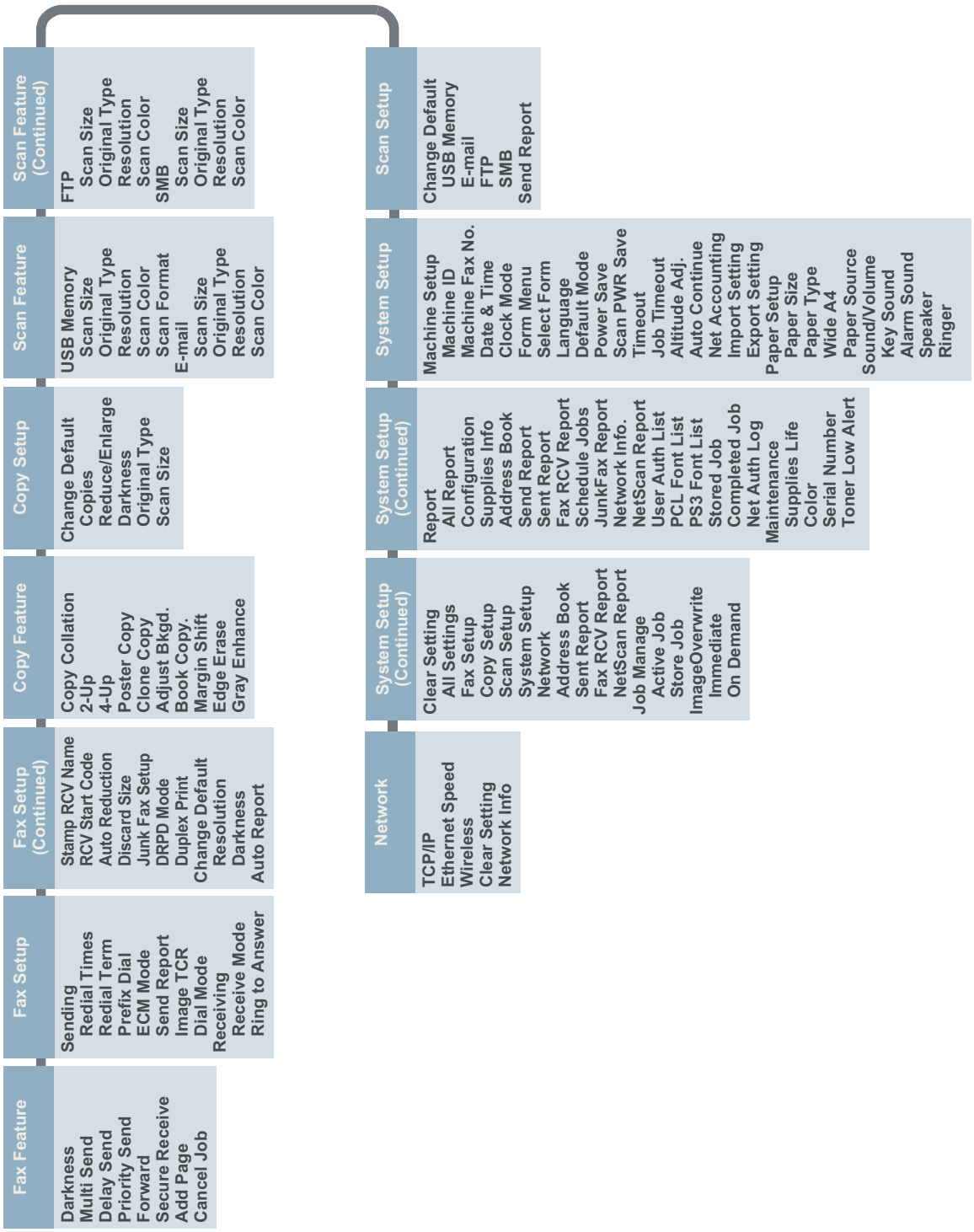
5. Press the OK button to confirm the selected item.

6. Press the Left/right arrow buttons until the menu item (ex. Print?) you want displays on the bottom line.

7. Press the OK button to process your selection, save your input or selection.
   An asterisk (*) appears next to the selection on the display, indicating that it is now the default.

8. To exit the menu, press the Back button repeatedly, or the Stop button.

4.1.4.2 Menu overview



4.1.4.3 Maintenance

This chapter provides information for maintaining your machine and the toner cartridge.

This chapter includes:
• Printing reports
• Adjusting the color contrast
• Clearing memory
• Cleaning your machine
• Maintaining the cartridge
• Replacing the toner cartridge
• Replacing the Paper Transfer Belt
• Maintenance parts
• Managing your machine from the website
• Checking the machine's serial number

■ PRINTING REPORTS

Your machine can provide various reports with useful information you will need. The following reports are available:

REPORT/LIST	DESCRIPTION
Configuration	This list shows the status of the user-selectable options. You may print this list to confirm your changes after changing settings.
Supplies Info	This list shows the current status of consumables in your machine.
Address Book	This list shows all of the fax numbers and email addresses currently stored in the machine's memory.
Send Report	This report shows the fax number, the number of pages, the elapsed time of the job, the communication mode, and the communication results for a particular fax job. You can set up your machine to automatically print a transmission confirmation report after each fax job.
Sent Report	This report shows information on the faxes and emails you have recently sent. You can set the machine to automatically print this report every 50 communications.
Fax RCV Report	This report shows information on the faxes you have recently received.
Schedule Jobs	This list shows the documents currently stored for delayed faxes along with the starting time and type of each operation.
Junk Fax Report	This list shows the fax numbers specified as junk fax numbers. To add or delete numbers to or from this list, access the Junk Fax Setup menu.
Network Info.	This list shows information on your machine's network connection and configuration.
NetScan Report	This report shows information for the Network Scan records including IP address, time and date, the number of pages scanned, and results. This report is automatically printed every 50 network scan jobs.
User Auth List	This list shows authorized users who are allowed to use the email function.
PCL Font List	You can print the PCL font list.
PS3 Font List	You can print the PS3 font list.
Stored Job	This list shows the current status of stored job on HDD.

REPORT/LIST	DESCRIPTION
Completed Job	The Completed Job page shows the list of completed print jobs. The list contains up to 50 files from the latest print jobs.
Net Auth Log	This list shows users and their IDs who logged in the domain.

Printing a report

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press the left/right arrow until Report appears and press OK.
3. Press the left/right arrow until the report or list you want to print appears and press OK.
   To print all reports and lists, select All Report.
4. Press OK when Yes appears to confirm printing.
   The selected information prints out.

Configuration Report

1

Date & Time : 07-JAN-2007 03:31 SUN
Fax Number :
Fax Name :
Model Name : Dell 2145cn

2

Options	Item	Status
Default Copies	[1-99]	1
Default Reduce/Enlarge	[Org.(100%)/LGL->LTR(78%)...]	Org.(100%)
Default Darkness	[Light/Normal...]	Normal
Default Original Type	[Text/ Text/Photo...]	Text/Photo
Darkness	[Light/Normal...]	Normal
Resolution	[Standard/Fine...]	Standard
Ring To Answer	[1-7]	1
Receive Mode	[Fax/Tel...]	Fax
Redial Term	[1-15]	3
Redial Times	[0-13]	7
Send Report	[On/Off...]	On-Err
Auto Report	[On/Off]	On
Auto Reduction	[On/Off]	On
Discard Size	[0-30]	20 mm
RCV Start Code	[0-9]	*9*
DRPD Mode	[On/Off]	Off
Paper Size(Tray 1/Tray 2)	[Letter/A4...]	A4/A4
Paper Size(MP Tray)	[Letter/A4...]	A4
Paper Size(Manual Feeder)	[Letter/A4...]	A4
Copy Tray	[Tray 1/Tray 2...]	Auto
Fax Tray	[Tray 1/Tray 2...]	Auto
Paper Type(Tray 1/Tray 2)	[Plain Paper/Bond...]	Plain Paper/Plain Paper
Paper Type(MP Tray)	[Plain Paper/Bond...]	Plain Paper
Paper Type(Manual Feeder)	[Plain Paper/Bond...]	Plain Paper
Send Forward/RCV Forward	[On/Off...]	Off/Off
Junk Fax Setup	[On/Off]	Off
Secure Receive	[On/Off]	Off
Prefix Dial	[Fax Number]	
Stamp RCV Name	[On/Off]	Off
ECM Mode	[On/Off]	On
Image TCR	[On/Off]	On
Speaker	[On/Off...]	Comm.
Ringer	[Off/Low...]	Mid
Key Sound	[On/Off]	Off
Alarm Sound	[On/Off]	On
Clock Mode	[12 Hours/24 Hours]	24 Hours
Language	[English/FRANCAIS...]	English
Default Mode	[Fax/Copy]	Copy
Power Save	[5/10/15...]	20 Min
Timeout	[15/30/60...]	30 Sec
Scan PWR Save	[0.5/1/2]	0.5 Hour(s)
Altitude Adjustment	[Normal/High 1...]	Normal
Color Adjustment	Color(K/C/M/Y)	0/0/0/0

3 Firmware/Engine Version	: 1.00.00.90 10-07-2007	1.00.79
Emulation Version	: PCL5Ce 5.33 09-28-2007	PCL6 5.59 10-05-2007
	PS3 V1.19.07 10-04-2007	SPL-C 5.32 08-27-2007
	PDF V1.00.46 06-22-2007	
SCF Version	: 1.00.02	
USB Serial	:	
4 IP Address/Memory Size	: 10.240.15.54	384 Mbyte

[Usage Meter Count]

Mono Simplex Print Count	3(impressions)	3(sheets)
Color Simplex Print Count	10(impressions)	10(sheets)
Mono Duplex Print Count	0(impressions)	0(sheets)
Color Duplex Print Count	0(impressions)	0(sheets)
Mono Simplex Copy Count	0(impressions)	0(sheets)
Color Simplex Copy Count	0(impressions)	0(sheets)
Mono Duplex Copy Count	0(impressions)	0(sheets)
Color Duplex Copy Count	0(impressions)	0(sheets)
Mono Simplex Fax-in Count	0(impressions)	0(sheets)
Color Simplex Fax-in Count	0(impressions)	0(sheets)
Mono Duplex Fax-in Count	0(impressions)	0(sheets)
Color Duplex Fax-in Count	0(impressions)	0(sheets)
Mono Simplex Report Count	2(impressions)	2(sheets)
Color Simplex Report Count	0(impressions)	0(sheets)

1. Date& Time, Fax number, Fax Name, Model Name - shows actual printed date of configuration pages, Fax number, Fax/Model name.

2. Options - shows various options set up in the printer.

3. Firmware/ Emulation version - shows date and version of firmware/emulation (PCL5Ce,PS3,PCL6,SPL-C)

4. IP Address/Memory Size - shows the IP address and memory installed in the printer.

Supplies Information Report

Date & Time : 07-JAN-2007 03:31 SUN
Fax Number :
Fax Name :
Model Name : Dell 2145cn

1	Total Page Count	: 10/5 Page(s) (color/mono)
	Page Count	: 893/841/692/888 (K/C/M/Y)
	Fuser Life	: 15 Page(s)
	Toner Remaining	: 85%/57%/76%/51% (K/C/M/Y)
2	Transfer Belt Life Remaining	: 93%
	Tray1 Roller Life	: 13 Page(s)
	MP Roller Life	: 0 Page(s)
	Tray2 Roller Life	: 2 Page(s)
	Model ID	: CLP-K660B/CLP-C660B (K/C) CLP-M660B/CLP-Y660B (M/Y) CLP-T660A (TB)
	Serial No.	: CRUM-07101738546/CRUM-07101558359 (K/C) CRUM-07101738433/CRUM-07101652516 (M/Y) CRUM-07090652003 (TB)
3	Product Date	: 2007.09./2007.08./2007.08./2007.08./2007.09. (K/C/M/Y/TB)
	Last Used Date	: 2007.01.06/2007.01.06 (K/C) 2007.01.06/2007.01.06 (M/Y) 2007.01.06 (TB)
4	First Installed Date	: 2007.01.04/2007.01.04 (K/C) 2007.01.04/2007.01.04 (M/Y) 2007.01.04 (TB)
	ADF Scan Page Count	: 58 Page(s)
	Platen Scan Page Count	: 25 Page(s)

[Consumables Information]

Black Toner	: (EUR)
Cyan Toner	: (EUR)
Magenta Toner	: (EUR)
Yellow Toner	: (EUR)
Transfer Belt Unit	: SAMSUNG(EXP)

Supplies Information Report shows the life of consumables.

1. Total Page Count/Page count (Pages)

2. The Life of Fuser/Toner/PTB/Various Rollers
- Fuser (Page), Toner, PTB(%), Rollers (Page)

3. Product Date/Last used Date

4. First Installed Date

5. ADF/Platen Scan Page count

■ ADJUSTING THE COLOR CONTRAST

Color menu allows you to adjust the color setting.

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press OK when Maintenance appears.
3. Press the left/right arrow until Color appears and press OK.
4. Press the left/right arrow until the menu you want appears on display and press OK.
   - Custom C olor:Allows you to adjust contrast color by color. Default optimizes color automatically. Manual Adjust allows you to manually adjust the color contrast for each cartridge. Default setting is recommended for getting best color quality.
   - Auto Color Reg.: Allows you to adjust the position of print color texts or graphics to match the original file on your screen.
5. Press Stop/Clear to return to ready mode.

■ CLEARING MEMORY

You can selectively clear information stored in your machine's memory.

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press the left/right arrow until Clear Setting appears and press OK.
3. Press the left/right arrow until the item you want to clear appears.

OPTIONS	DESCRIPTION
All Settings	Clears all of the data stored in memory and resets all of your settings to the factory default.
Fax Setup	Restores all of the fax options to the factory default.
Copy Setup	Restores all of the copy options to the factory default.
Scan Setup	Restores all of the scan options to the factory default.
System Setup	Restores all of the system options to the factory default.
Network	Restores all of the network options to the factory default.
Address Book	Clears all of the fax number and email address entries stored in memory.
Sent Report	Clears all records of sent faxes and emails.
Fax RCV Report	Clears all records of received faxes.
NetScan Report	Clears the information on network scan sessions in memory.

4. Press OK when Yes appears.
5. Press OK again to confirm clearing.
6. Repeat steps 3 through 5 to clear another item.
7. Press Stop/Clear to return to ready mode.

■ CLEANING YOUR MACHINE

To maintain print and scan quality, follow the cleaning procedures below each time the toner cartridge is replaced or if print and scan quality problems occur.

Cleaning the outside

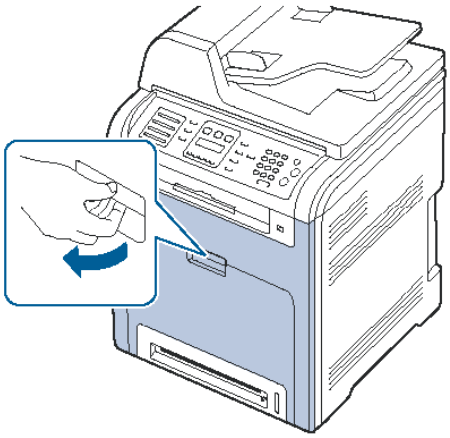
Clean the cabinet of the machine with a soft lint-free cloth. You can dampen the cloth slightly with water, but be careful not to let any water drip onto or into the machine.

Cleaning the inside

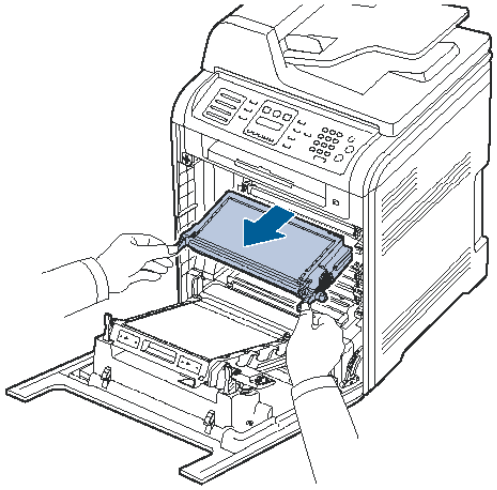
During the printing process, paper, toner, and dust particles can accumulate inside the machine. This buildup can cause print quality problems, such as toner specks or smearing. Cleaning the inside of the machine clears or reduces these problems.

1. Turn the machine off and unplug the power cord. Wait for the machine to cool down.

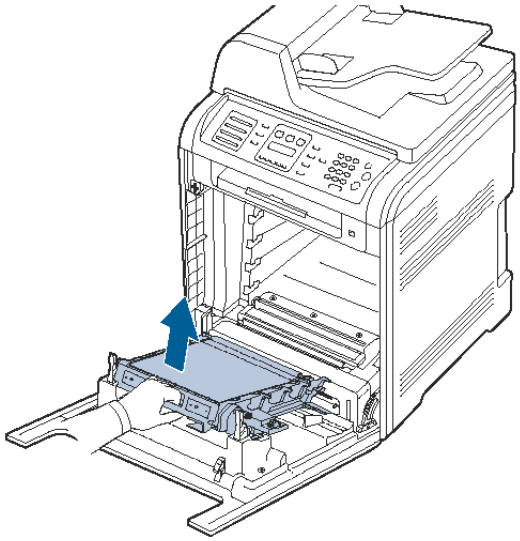
2. Using the handle, completely open the front cover.



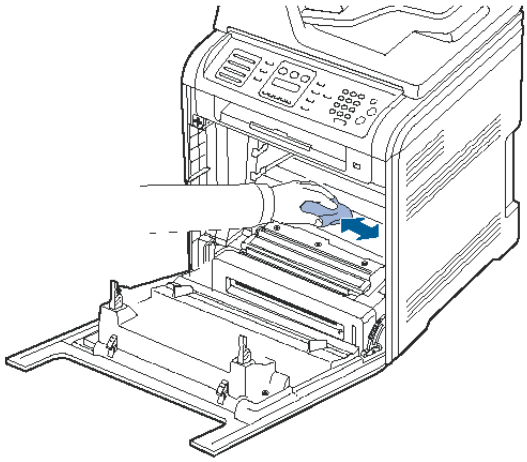
3. Grasp the handles on the toner cartridge and pull to remove the cartridge from the machine.



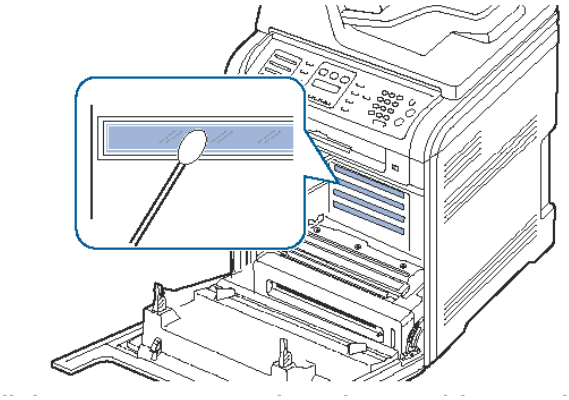
4. Press the green release handle to release the paper transfer belt.
   Holding the handle on the paper transfer belt, lift it out of the machine.



5. With a dry lint-free cloth, wipe away any dust and spilled toner from the toner cartridges area and their cavities.



6. Locate the long strip of glass (LSU) inside the cartridge compartment, and gently swab the glass to see if dirt turns the white cotten black.



7. Reinstall all the compartments into the machine, and close the front cover.

8. Plug in the power cord and turn the machine on.

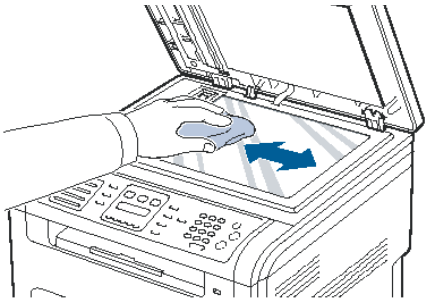
Cleaning the scan unit

Keeping the scan unit clean helps ensure the best possible copies. We suggest that you clean the scan unit at the start of each day and during the day, as needed.

1. Slightly dampen a soft lint-free cloth or paper towel with water.

2. Open the scanner lid.

3. Wipe the surface of the scanner glass and DADF glass until it is clean and dry.



4. Wipe the underside of the scanner lid and white sheet until it is clean and dry.

5. Close the scanner lid.

■ MAINTAINING THE CARTRIDGE

Toner cartridge storage

To get the most from the toner cartridge, keep the following guidelines in mind:

- Do not remove the toner cartridge from its package until ready for use.
- Do not refill the toner cartridge. The machine warranty does not cover damage caused by using a refilled cartridge.
- Store toner cartridges in the same environment as your machine.
- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes.

Expected cartridge life

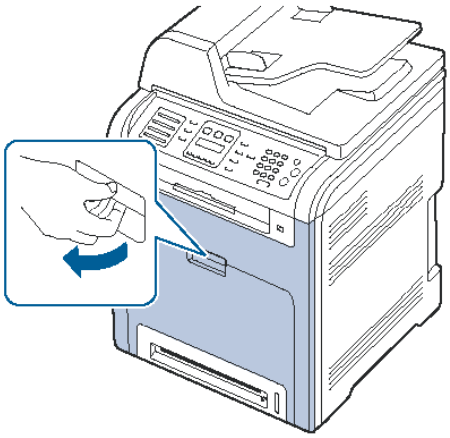
The life of the toner cartridge yield depends on the amount of toner that print jobs require. The actual number may also be different depending on the print density of the pages you print on, and the number of pages may be affected by operating environment, printing interval, media type, and media size. If you print a lot of graphics, you may need to change the cartridge more often.

Redistributing toner

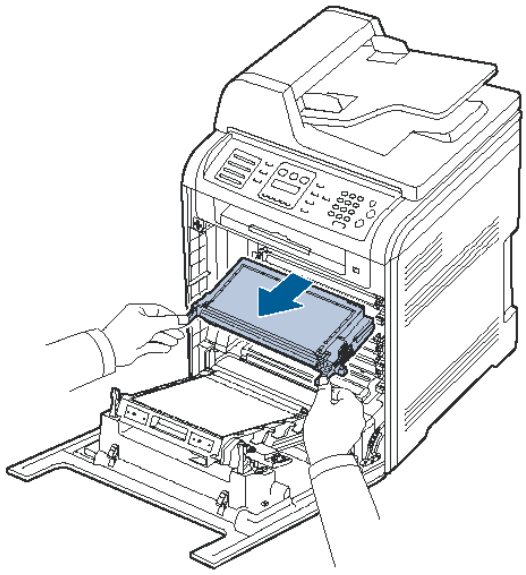
When a toner is low, faded or light areas may appear. It is possible that colored images may be printed with incorrect colors due to flawed mixing of toner colors when one of the colored toner cartridges is low on toner. You can temporarily improve print quality by redistributing the toner.

- The toner-related message saying that the toner is low may appear on the display.
- The SmartPanel program window appears on the computer telling you which color cartridge is low on toner.

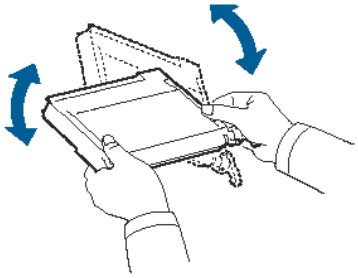
1. Using the handle, completely open the front cover.



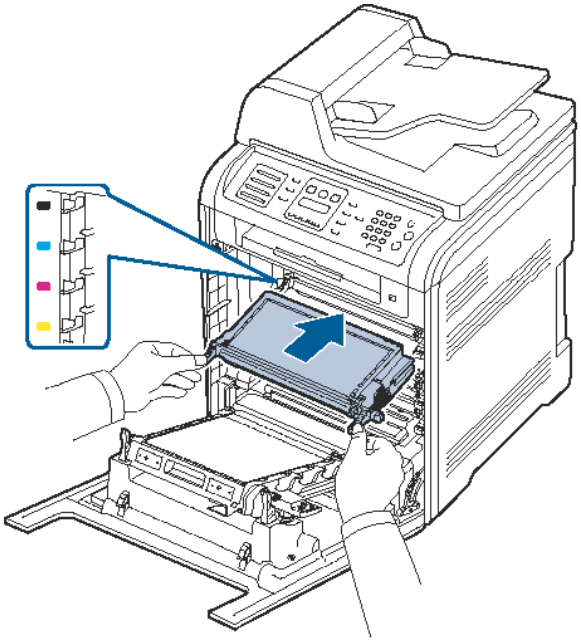
2. Grasp the handles on the toner cartridge and pull to remove the cartridge from the machine.



3. Holding both handles on the toner cartridge, thoroughly rock it from side to side to evenly distribute the toner.



4. Slide the toner cartridge back into the machine.



5. Close the front cover. Make sure the cover is securely latched.

■ REPLACING THE TONER CARTRIDGE

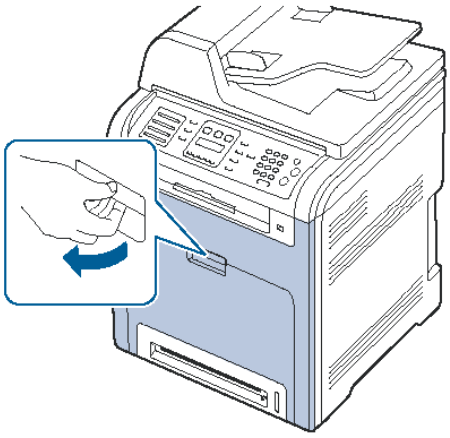
The machine uses four colors and has a different toner cartridge for each one: yellow (Y), magenta (M), cyan (C), and black (K).

- The status LED and the toner-related message on the display indicates which each individual toner cartridge should be replaced.
- For the Dell 2145cn, incoming faxes are saved in memory.

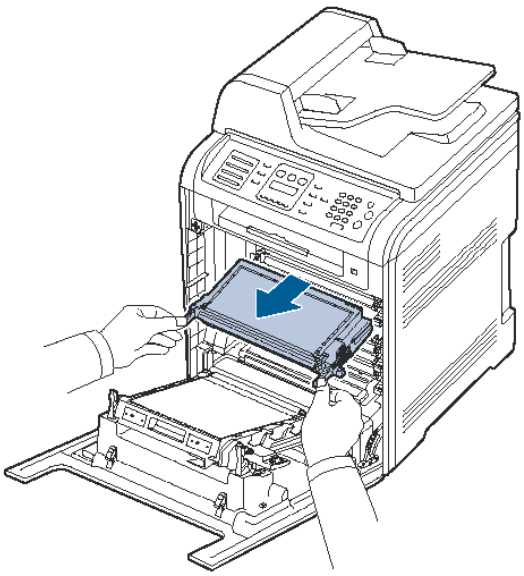
At this stage, the toner cartridge needs to be replaced. Check the type of toner cartridge for your machine.

1. Turn the machine off, then wait a few minutes for the machine to cool.

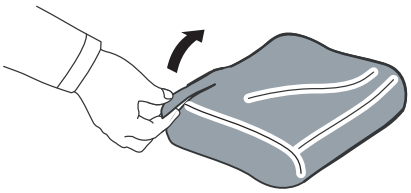
2. Using the handle, completely open the front cover.



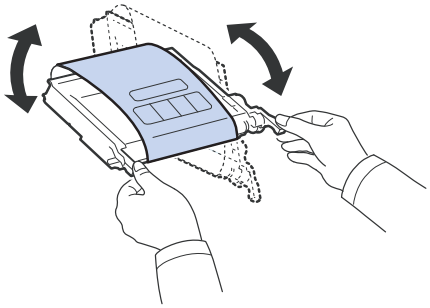
3. Grasp the handles on the toner cartridge and pull to remove the cartridge from the machine.



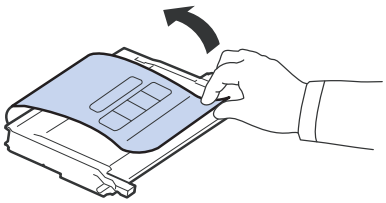
4. Take a new toner cartridge out of its package.



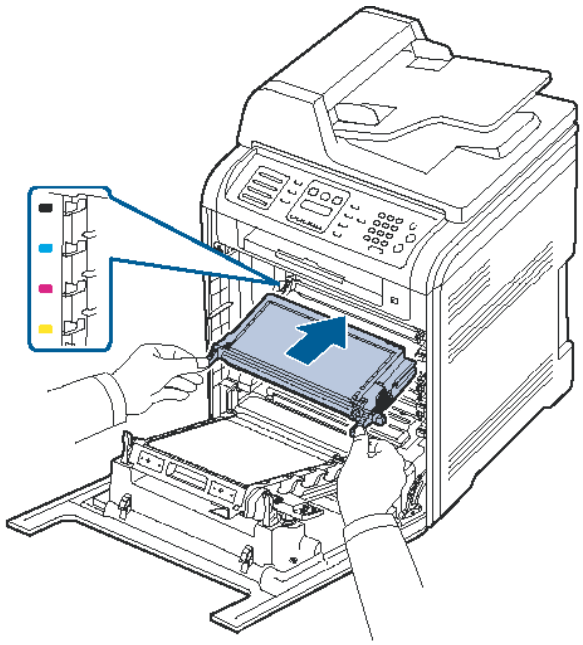
5. Holding both handles on the toner cartridge, thoroughly rock it from side to side to evenly distribute the toner.



6. Place the toner cartridge on a flat surface, as shown, and remove the paper covering the toner cartridge by removing the tape.



7. Make sure that the color of the toner cartridge matches the color slot and then grasp the handles on the toner cartridge. Insert the cartridge until it clicks into place.



8. Close the front cover. Make sure that the cover is securely latched, and then turn the machine on.

Sending new toner notification

You can set your machine to automatically send a fax to your service company or dealer to notify them that your machine requires a new toner cartridge when the toner cartridge needs to be replaced. The fax number needs to be set by your dealer prior to using this feature, otherwise the machine cannot send a notification even though you turn this service on.

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press the left/right arrow until Maintenance appears and press OK.
3. Press the left/right arrow until Remote Service appears and press OK.
4. Enter a password and press OK.
5. Re-enter the password and press OK.
6. Press the left/right arrow to select On and press OK.
7. Press Stop/Clear to return to ready mode.

Once this feature has been enabled, you need to enter the password each time you disable or enable it.

Clearing the Toner Empty message

When the Toner Empty message appears you can configure not to see this message again not to disturb you.

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press the Scroll buttons until Maintenance appears and press OK.
3. Press the Scroll buttons until CLR Empty Msg. appears and press OK.
4. Press the left/right arrow until the color menu you want appears on display and press OK.
5. Select On and press OK.
6. Now the Toner Empty message does not appear but the Replace Toner message will remain for reminding you that the new cartridge needs to be installed for quality.

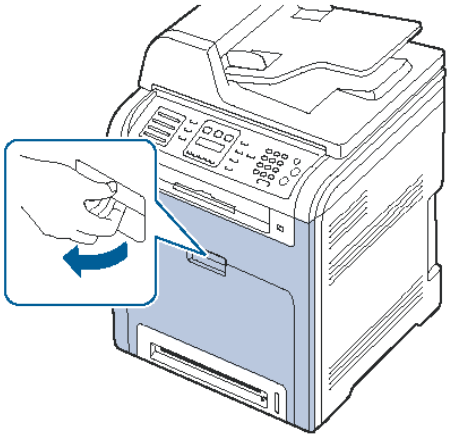
■ REPLACING THE PAPER TRANSFER BELT

The life of the paper transfer belt is approximately 50,000 black and color pages. When the life span of the paper transfer belt, you have to replace it.

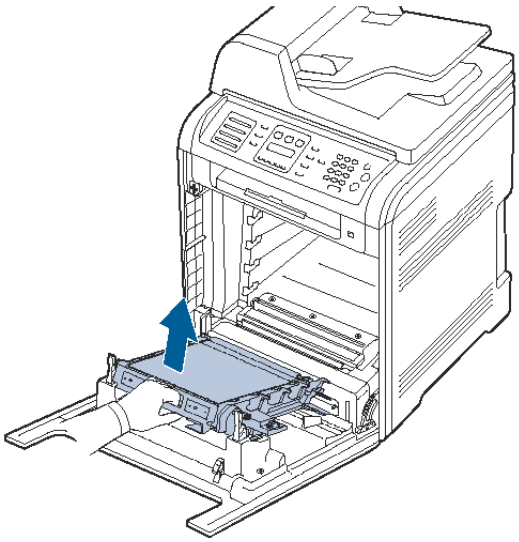
- The transfer belt related message appears on the display telling it's replacement.
- SmartPanel program window appears on the computer telling you the paper transfer belt needs to be replaced.

1. Turn the machine off, then wait a few minutes for the machine to cool.

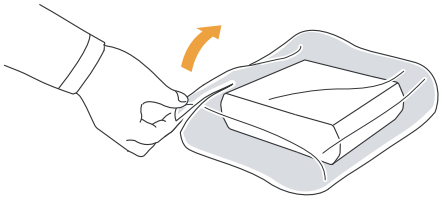
2. Using the handle, completely open the front cover.



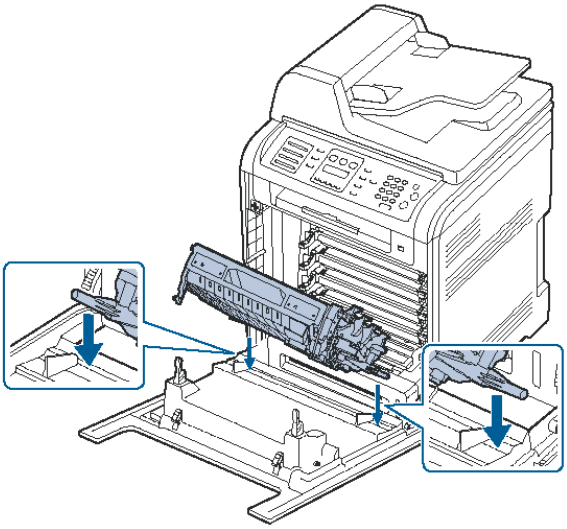
3. Press the green release handle to release the paper transfer belt. Holding the handle on the paper transfer belt, lift it out of the machine.



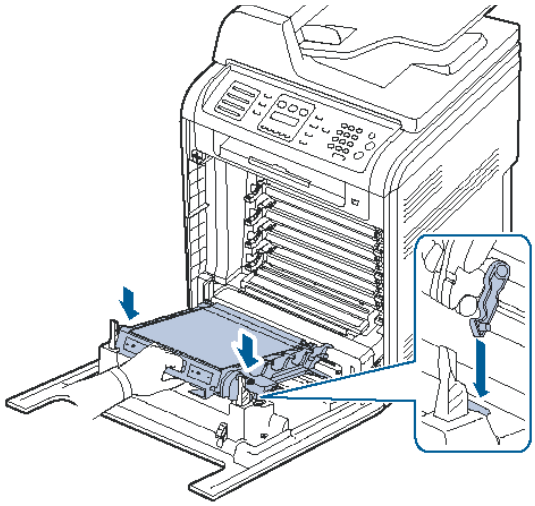
4. Take a new paper transfer belt out of its package.



5. Holding the handle on the new paper transfer belt, align it with the slots on the inside of the front cover.



6. Lower the paper transfer belt until it is parallel with the front cover and firmly seated.



7. Close the front cover firmly.

8. Turn the machine on.

■ MAINTENANCE PARTS

To avoid print quality and paper feed problems resulting from worn parts, and to maintain your machine in top working condition the following condition, the following items will need to be replaced after the specified number of pages, or when the life span of each item has expired.

ITEMS	YIELD (AVERAGE)
Fuser unit	Approx. 100,000 pages
DADF friction pad	Approx. 20,000 pages
DADF pick-up roller	Approx. 80,000 pages
Pick-up roller (Multi-purpose tray, FCF [a] , Optional tray 2)	Approx. 70,000 pages
Friction pad (Multi-purpose tray, FCF, Optional tray 2)	Approx. 70,000 pages

a. First cassette feeder (Tray1)

We highly recommend that this maintenance be performed by an authorized service provider, dealer or the retailer where you bought the machine. The warranty does not cover the replacement of the maintenance parts after their lifespan.

Checking replaceables

If you experience frequent paper jams or printing problems, check the number of pages the machine has printed or scanned. Replace the corresponding parts, if necessary.

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press the left/right arrow until Maintenance appears and press OK.
3. Press the left/right arrow until Supplies Life appears and press OK.
4. Press the left/right arrow until the item you want appears and press OK.
   - Supplies Info: Prints the supply information page.
   - Total: Displays the total number of pages printed.
   - ADF Scan: Displays the number of pages scanned using the ADF.
   - Platen S can: Displays the number of pages scanned using the scanner glass.
   - Transfer Belt, Fuser, Tray1 Roller, Tray2 Roller, MP Tray Roller: displays the number of pages printed for each item.

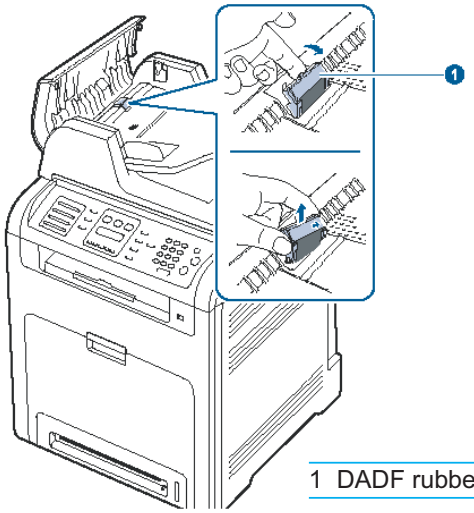
5. If you selected to print a supply information page, press OK to confirm.
6. Press Stop/Clear to return to ready mode.

Replacing the DADF rubber pad

You will need to replace the DADF rubber pad when there seems to be a consistent problem with paper pickup or when its specified yield is reached.

1. Open the DADF cover.

2. Remove the DADF rubber pad from the DADF, as shown.



1 DADF rubber pad

3. Insert a new DADF rubber pad into place.

4. Close the DADF cover.

■ MANAGING YOUR MACHINE FROM THE WEBSITE

If you have connected your machine to a network and set up TCP/IP network parameters correctly, you can manage the machine via Dell's Web Service, an embedded web server. Use Web Service to:

- View the machine's device information and check its current status.
- Change TCP/IP parameters and set up other network parameters.
- Change the printer properties.
- Set the machine to send email notifications to let you know the machine's status.
- Get support for using the machine.

To access Web Service:

1. Start a web browser, such as Internet Explorer, from Windows.
2. Enter the machine IP address (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click Go. Your machine's embedded website opens.

■ CHECKING THE MACHINE'S SERIAL NUMBER

When you call for service or register as a user on the website, the machine's serial number may be required.

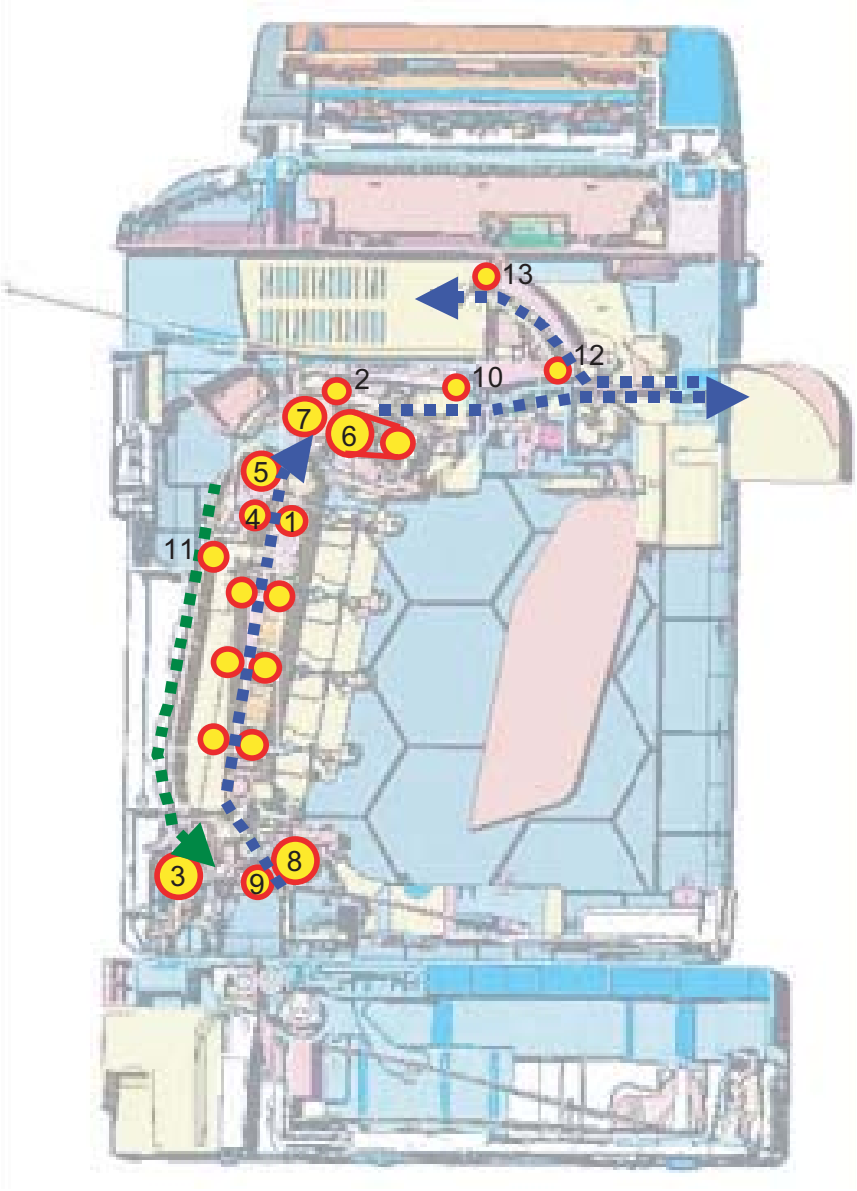
You can check the serial number by taking the following steps:

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press the left/right arrow until Maintenance appears and press OK.
3. Press the left/right arrow until Serial Number appears and press OK.
4. Check your machine's serial number.
5. Press Stop/Clear to return to ready mode.

4.1.4.4 Periodic Defective Image

If an image defects appears at regular intervals on the printed-paper, it is due to a faulty or damaged roller. Refer to the table below and check the condition of the appropriate roller.

No	Roller	Period	Phenomenon
1	OPC Drum	75.4mm	White and Black Spots
2	Charge Roller	26.7mm	White/Black Spot and Periodic Band
3	Supply Roller	40.8~41mm	Periodic Band (by little difference of density)
4	Developing Roller	30.6mm (YMC)	White Spot, Horizontal black band
		32.5mm(K)	
5	Transfer Roller	43.9mm	Periodic Band (by little difference of density)
6	Gap-ring	39.0mm	Periodic Band
7	Fusing Belt	127.0mm	White/Black Spot



1	OPC	8	Pick-up Roller
2	Charge Roller	9	Regi Roller
3	MP Roller	10	Exit Roller
4	Deve Roller	11	Duplex Roller
5	Transfer Roller	12	Reverse middle Roller
6	Heat Roller	13	Reverse Exit Roller
7	Pressure Roller		

4.1.4.5 F/W Upgrade

• USB and Network port are used to F/W upgrade.

• Network applications (EWS) can be used for network port upgrade.

• Notice : In special mode upgrade, kernel waste header information for Dell 2145cn.
You have to check F/W ROM file with MFP set
(This mode is ONLY service mode, not user mode)

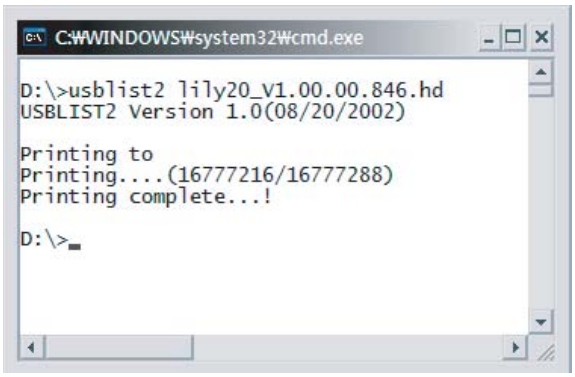
1) Using button

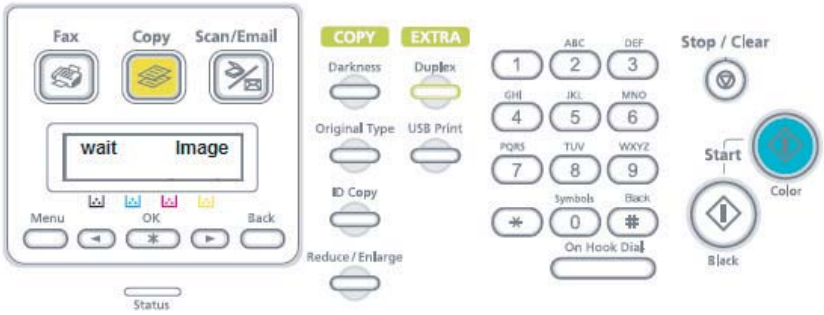
• F/W Upgrade using USB Port

- Make sure connecting Printer to the computer with a USB cable

- Upgrade in Ready mode
  ► Send ROM image file via USB cable in Ready mode

- Upgrade in Special mode
  ► Power ON with pressing 'STOP key' two times
  ► Change LCD message 'Wait Image'
  ► Send ROM image file via USB cable

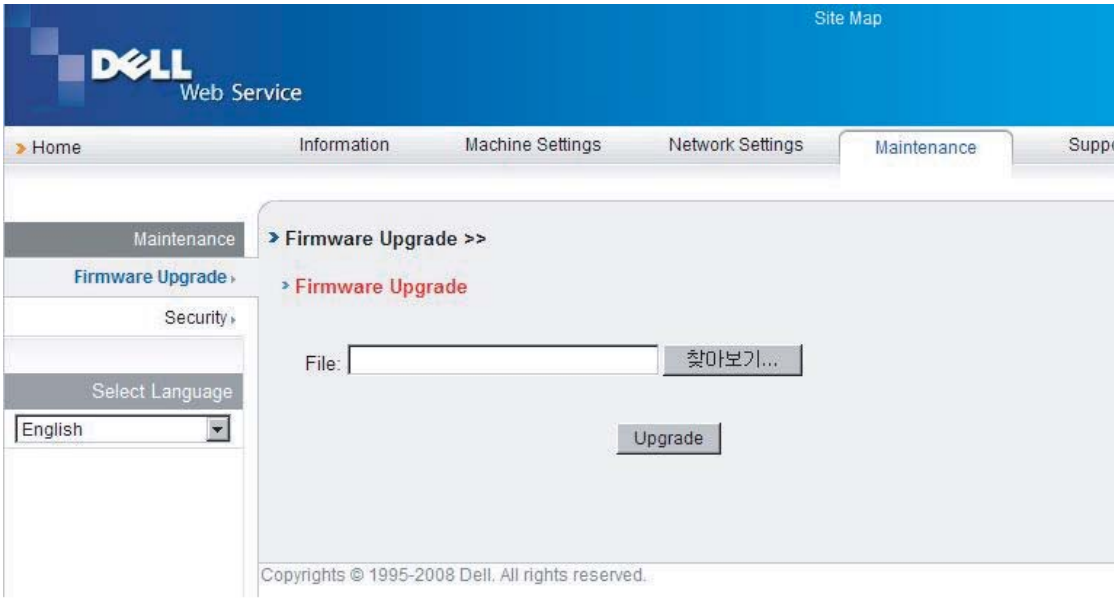




2) Using SWS

• F/W upgrade using EWS

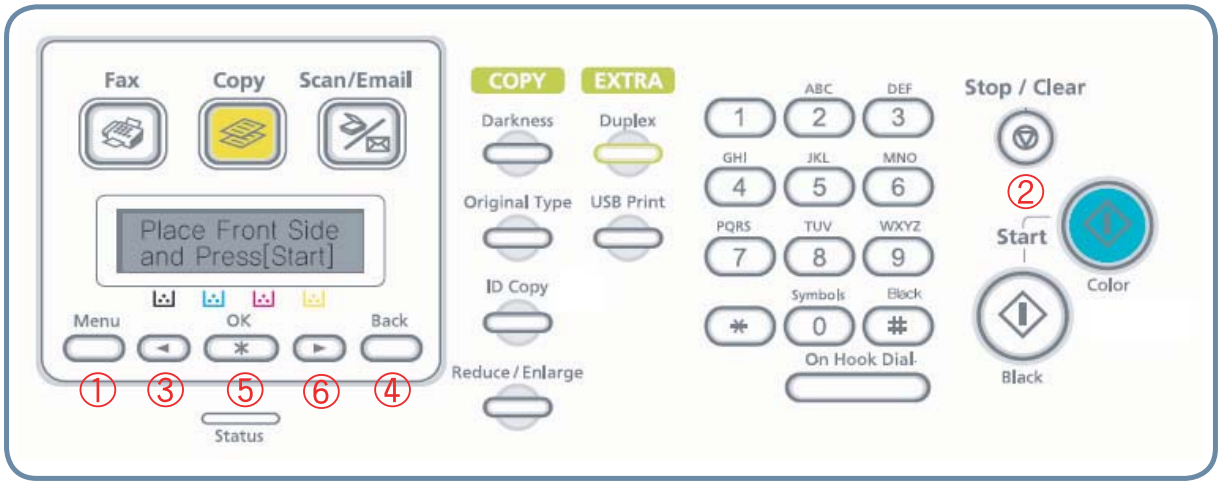
- Home -> Maintenance -> Firmware Upgrade



4.1.4.6 EDC Mode

■ Method to enter

1. Power - On the printer, and wait until the “READY” message appearing on LCD Panel.
2. Push button like next time “Menu -> Stop -> Left arrow -> Back -> OK -> Right arrow”
3. “COMPONEMT TEST Press Menu Key”



■ Keys

Key	Description
Menu	Move to the top menu
Left Arrow	Move test item
OK	Start testing or select Sub-item
Right arrow	Move test item
Back	Move upper menu
Stop	Stop testing

■ EDC Menu

0. Cover Status

Key	Description
Top Cover	When a top cover opened, “Open” message display LCD. If the top cover closed, “Closed” message display LCD
Tray2 Door	When a tray2 door opened, “Open” message display LCD. If the tray2 door closed, “Closed” message display LCD

1. Sensor Status

Key	Description
Regi. Sensor	If actuator is checked by sensor, "Without Paper" message will be displayed. if not, "With Paper" will be.
Exit Sensor	If actuator is checked by sensor, "Without Paper" message will be displayed. if not, "With Paper" will be.
MP Empty	If paper exists in the MP tray, "With Paper" will be displayed. If not, "Without Paper" will be.
T1 Paper Empty	If paper exists in the 1st tray, "With Paper" will be displayed. If not, "Without Paper" will be.
T2 Paper Empty	If paper exists in the 2nd tray, "With Paper" will be displayed. If not, "Without Paper" will be.
Rev. Swing Sensor	If actuator is checked by sensor, "Without Paper" message will be displayed. if not, "With Paper" will be.
Rev. Exit Sensor	If actuator is checked by sensor, "Without Paper" message will be displayed. if not, "With Paper" will be.

2. Motor Test

Key	Description
Main Mtr Nor.	If “OK” key is pushed after “ON” displayed, motor will be run. Main motor will auto - stop after 5 seconds and ”OFF” message will be displayed.
Dev Mtr Nor.	If “OK” key is pushed after “ON” displayed, motor will be run. Dev motor will auto - stop after 5 seconds and ”OFF” message will be displayed.
Fuser Mtr Fwd.	If “OK” key is pushed after “ON” displayed, motor will be run forward. Fuser motor will auto - stop after 5 seconds and ”OFF” message will be displayed.
Fuser Mtr Bwd.	If “OK” key is pushed after “ON” displayed, motor will be run Backward. Fuser motor will auto - stop after 5 seconds and ”OFF” message will be displayed.
T2 Feed Motor	If “OK” key is pushed after “ON” displayed, motor will be run. T2 feed motor will auto - stop after 5 seconds and ”OFF” message will be displayed.
Reverse Mtr	If “OK” key is pushed after “ON” displayed, motor will be run. Dev motor will auto - stop after 5 seconds and ”OFF” message will be displayed.

3. Fan Test

Key	Description
Fuser Fan	If “OK” key is pushed after “ON” displayed, fan will be run. Fuser fan will auto - stop after 5 seconds and ”OFF” message will be displayed.
SMPS Fan	If “OK” key is pushed after “ON” displayed, fan will be run. SMPS fan will auto - stop after 5 seconds and ”OFF” message will be displayed.
LSU Fan	If “OK” key is pushed after “ON” displayed, fan will be run. LSU fan will auto - stop after 5 seconds and ”OFF” message will be displayed.
Reverse Fan	If “OK” key is pushed after “ON” displayed, fan will be run. Reverse fan will auto - stop after 5 seconds and ”OFF” message will be displayed.

4. Clutch/Sol.

Key	Description
T1 P - up Clutch	When “OK” key is pushed after ”ON” message displayed, clutch turn on. pick up clutch will be turn off after 5 seconds and ”OFF” message will be displayed.
T2 P - up Clutch	When “OK” key is pushed after ”ON” message displayed, clutch turn on. pick up clutch will be turn off after 5 seconds and ”OFF” message will be displayed. (when SCF is not installed, “not installed” message will be displayed)
MP P - up Clutch	When “OK” key is pushed after ”ON” message displayed, clutch turn on. pick up clutch will be turn off after 5 seconds and ”OFF” message will be displayed.
K Dev. Clutch	When “OK” key is pushed after ”ON” message displayed, clutch turn on. K - clutch will be turn off after 5 seconds and ”OFF” message will be displayed.

5. Fuser Ctrl

Key	Description
Fuser1 Control	Fuser 1 on and off. “ON” is selected, fuser will be active and display the fuser temperature [XXX] but “OFF” is selected, fuser will be stop and [0] display
Fuser2 Control	Fuser 2 on and off. “ON” is selected, fuser will be active and display the fuser temperature [XXX] but “OFF” is selected, fuser will be stop and [0] display
Fuser Temp.A	Fuser1 temperature displayed on LCD (example: [251])
Fuser Temp.B	Fuser2 temperature displayed on LCD (example: [251])

6. LSU Control

Key	Description
LD Power Y	When “OK” key is pushed after ”ON” message displayed, ”OFF” message will be displayed after 5 seconds
LD Power M	When “OK” key is pushed after ”ON” message displayed, ”OFF” message will be displayed after 5 seconds
LD Power C	When “OK” key is pushed after ”ON” message displayed, ”OFF” message will be displayed after 5 seconds
LD Power K	When “OK” key is pushed after ”ON” message displayed, ”OFF” message will be displayed after 5 seconds
LSU Motor	If “OK” key is pushed after “ON” displayed, motor will be run. LSU motor will auto - stop after 5 seconds and ”OFF” message will be displayed.

7. DEV Control

Key	Description
Charger	If “OK” key is pushed after “ON” displayed, Charger voltage will be turned on.
Dev DC Y	If “OK” key is pushed after “ON” displayed, Dev DC Y will be turned on.
Dev DC M	If “OK” key is pushed after “ON” displayed, Dev DC M will be turned on.
Dev DC C	If “OK” key is pushed after “ON” displayed, Dev DC C will be turned on.
Dev DC K	If “OK” key is pushed after “ON” displayed, Dev DC K will be turned on.
Dev AC Y	If “OK” key is pushed after “ON” displayed, Dev AC Y will be turned on.
Dev AC M	If “OK” key is pushed after “ON” displayed, Dev AC M will be turned on.
Dev AC C	If “OK” key is pushed after “ON” displayed, Dev AC C will be turned on.
Dev AC K	If “OK” key is pushed after “ON” displayed, Dev AC K will be turned on.
Dev TR Y	If “OK” key is pushed after “ON” displayed, Dev TR Y will be turned on.
Dev TR M	If “OK” key is pushed after “ON” displayed, Dev TR M will be turned on.
Dev TR C	If “OK” key is pushed after “ON” displayed, Dev TR C will be turned on.
Dev TR K	If “OK” key is pushed after “ON” displayed, Dev TR K will be turned on.
P Charger	If “OK” key is pushed after “ON” displayed, Paper Charger will be turned on.

8. Reset Param

Key	Description
Reset Color Reg	“YES” is Selected, reset color registration starts.

(Take care of this menu because all color regi. data is initialized.)

9. Print Test

Key	Description
Pattern Print	“YES” is Selected, pattern printing starts.

4.1.4.7 Tech Mode

■ How to Enter Tech Mode

In service (tech) mode, the technician can check the machine and perform various test to isolate the cause of a malfunction.
While in Tech mode, the machine still performs all normal operations.

To enter the Tech mode, press “Menu → # → 1 → 9 → 3 → 4 → Menu” in sequence, and the LCD briefly displays ‘TECH Menu’, the machine has entered service (tech) mode.

Depth 1	Depth 2	Depth 3	Depth 4
Data Setup	Send Level	-9~-15	-12
	DTMF Level	[Hi]=xx,[Lo]=xx	
	Pause Time	0~9	
	Dial Mode	Tone,Pulse	Tone
	Modem Speed	33.6, 28.8, 14.4, 12.0, 9.6, 4.8	33.6
	Error Rate	5%, 10%	10%
	Clear All Mem.		
	Clear Counts	Fuser	
		Tray1 Roller	
		Tray2 Roller	
		MP Tray Roller	
	Margin	Top Margin	[-10-10]:0
		Left Margin	[-10-10]:0
		Fine Edge	Minimum
		Normal *	
		Maximum	
		Off	
		Darken Text	On *
		Off	
	Toner Low Level	[1~30]% : 10 *	
	New Sensor	On	
		Off *	
	B2B Mode	0-99	
	HDD Format	Yes?	
		No?	
	Service tag		
Machine Test	Switch Test	REDUCE_PANEL	
		COMPLETE_PANEL	
	Modem Test		
	ContinuousDial		
	DRAM Test		
	ROM Test		
	Shading Test	Shading&Print	
		Print Data	

Depth 1	Depth 2	Depth 3	Depth 4
Machine Test	Fuser Offset	StandBy Temp.	[-20-0]:0*,-5,-10,-15,-20
		Run Temp.	[-20-0]:0*,-5,-10,-15,-20
		101-185mm Temp.	[-20-0]:0*,-5,-10,-15,-20
		186-216mm Temp.	[-20-0]:0*,-5,-10,-15,-20
		90 gms Temp.	[-20-0]:0*,-5,-10,-15,-20
		Bond Temp.	[-20-0]:0*,-5,-10,-15,-20
		OHP Temp.	[-20-0]:0*,-5,-10,-15,-20
		Cardstock Temp.	[-20-0]:0*,-5,-10,-15,-20
		Env. Temp.	[-20-0]:0*,-5,-10,-15,-20
		Label Temp.	[-20-0]:0*,-5,-10,-15,-20
Report	All Report		
	Protocol		
	Configuration		
	Supplies Info		
	Error Info		
	Usage Page		
	ComponentCheck		
	Service Support		

■ Data Setup

SEND LEVEL

You can set the level of the transmission signal. Typically, the Tx level should be under -12 dBm.
Caution : The Send Fax Level is set at the best condition in the shipment from factory.
Never change settings arbitrarily.

DIAL MODE

This function can choose dial method.
*Default : Dial(Dial/Pulse)

MODEM SPEED

You can set the maximum modem speed.
Communication is done with modem speed automatically set at lower speed when communicating with a slower speed modem since communication is done on the standard of the side where modem speed is low for transmission/reception. It is best set 33.6Kbps as default setting.

ERROR RATE

When the error rate is about exceed the set value, the Baud rate automatically adjusts to 2400 bps.
This ensures that the error rate remains below the set value.
You can select the rate between 5% and 10%.

CLEAR ALL MEMORY

The function resets the system to factory default settings.
This function is used to reset the system to the initial value when the product is functioning abnormally. All the values are returned to the default values, and all the information, which was set by the user, will be erased.

< Method >

1. Select the [Data Setup - Clear All Mem.] at the TECH MODE.
2. Push the ENTER button.
3. Select you country.
4. Push the ENTER button then it will clear all memory.

NOTICE : Always perform a memory clear after replacing the main board. Otherwise, the system may not operate properly.

Margin

The function is to set the Top Margin or Left margin of all image.

Fine Edge

The function is to enhance the printing resolution by adjusting Dot Size for Font Size.

Darken Text

The function is to make all text printed darken.

Toner Low Level

The function is to set up the time to inform toner low status. This function can provide user convenience for replacing the toner cartridge.

New Sensor

The function is to adjust Top Margin for New board whose feeder sensor's position was changed.

B2B Mode

The function is to customize special feature.

HDD Format

The function is to format HDD.

Service tag

The function is to maintain service number.

■ Machine Test

SWITCH TEST
Use this feature to test all keys on the operation control panel. The result is displayed on the LCD window each time you press a key.

MODEM TEST
Use this feature to hear various transmission signals to the telephone line from the modem and to check the modem. If no transmission signal sound is heard, it means the modem part of the main board malfunctioned.

DRAM TEST
Use this feature to test the machine's DRAM. The result appears in the LCD display.
If all memory is working normally, the LCD shows << O K >>

ROM TEST
Use this feature to test the machine'S ROM. The result and the software version appear in the LCD display.

SHADING TEST
The function is to get the optimum scan quality by the specific character of the CCD(Charge Coupled Device). If the copy image quality is poor, perform this function to check the condition CCD unit.

< Method >
1. Select the [Machine Test-Shading Test] at the TECH MODE.
2. Push the SET UP button then an image will be scanned.
3. After the scan, CCD SHADING PROFILE will be print out.
4. If the printed image is different to the image, the CCD is defect.

NOTICE : When you test CCD, make sure that the cover is closed.

4.1.5 Error Message

Messages appear on the control panel display to indicate the machine's status or errors. Refer to the tables below to understand the messages' meaning and correct the problem if necessary. Messages and their meanings are listed in alphabetical order.

• xxx indicates the media type.
• yyy indicates the tray.

Message	Meaning	Suggested Solution
[COMM. Error]	The machine has a communication problem.	Ask the sender to try again.
[Incompatible]	The machine has received a fax from which is registered as a junk fax.	The received fax data will be deleted. Reconfirm junk fax setup.
[Line Error]	Your machine cannot connect with the receiving fax machine or has lost contact because of a problem with the phone line.	Try again. If the problem persists, wait an hour or so for the line to clear and try again. Or, turn the ECM mode on.
[No Answer]	The receiving fax machine has not answered after several redial attempts.	Try again. Make sure that the receiving machine is operational.
[Stop Pressed]	Stop/Clear has been pressed during an operation.	Try again.
[yyy] Paper Empty	There is no paper in the tray.	Load paper in the tray.
[yyy] Paper Mismatch	The paper size specified in the printer properties does not match the paper you are loading.	Load the correct paper in the tray.
[yyy] Cassette Out	The tray cassette is not properly closed.	To close the tray, lower the rear edge, align it with the slot, and slide it into the printer.
Adjusting... Registration	The machine is adjusting the color registration	Wait a few minutes.
Authentication Failure	The ID or password you entered is incorrect.	Enter the correct ID or password.
Cancel? ◀ Yes ▶	Your machine's memory has become full while trying to store an original into memory.	To cancel the fax job, press the OK button to accept Yes. If you want to send those pages that have been successfully stored, press the OK button to accept No. You should send the remaining pages later, when memory is available.
Connection Error	Connection with the SMTP server failed.	Check the server settings and the network cable.
Connection Failed	The protocol you have entered is not supported or server port is wrong.	Check the protocol or server port.
DADF Cover Open Error	The DADF cover is not securely latched.	Close the DADF cover until it locks into place.
Data Read Fail Check USB Mem.	Time expired while reading data.	Try again.

Message	Meaning	Suggested Solution
Data Write Fail Check USB Mem.	Storing to the USB memory failed.	Check the available USB memory space.
Document Jam	The loaded original has jammed in the DADF.	Clear the jam.
Door Open/Check Transfer Belt	The front cover is not securely latched.	Close the cover until it locks into place.
Duplex Jam 0 Check Inside	Paper has jammed during duplex printing. This is applicable only to machines with this feature.	Clear the jam.
Duplex Jam 1 Open/Close Door	Paper has jammed during duplex printing. This is applicable only to machines with this feature.	Clear the jam.
Enter Again	You entered an unavailable item.	Enter the correct item again.
File Access Denied	Login to the network server was successful. However, access to the file on the network server was denied.	Change the server settings.
File Format Not Supported	The selected file format is not supported.	Use the correct file format.
File Name Exist	The file name you have entered already exists.	Enter a different file name.
File Name Over Limit	The file names you can use are from doc001 to doc999. However, all file names are used already.	Delete unnecessary files.
Fuser Fan Locked	There is a problem in the cooling fan of the machine.	Open and then close the front cover.
Global Address Not Found	When the device is unable to locate the given address of the Global server.	Check the search ID.
Global Query Size Exceeded	This is an error message and displays when the global query size has been exceeded.	There are too many search results. Refine your search by entering more letters. Contact a LDAP server administrator.
Global Server Auth Failed	When there is a authentication fail while connecting to the global server this message displays.	Check the authentication account and password.
Global Server Not Configured	When no global server is configured, this message displays.	Check the LDAP server configuration settings.
Global Server Not Found	When the device is unable to find the Global server.	Check the LDAP server address, The LDAP server address is incorrect, or the server has failed.
Global Server Query Timeout	Network Information Center (NIC) failed to get the proper response from the LDAP server within specified time.	Check the LDAP server setting, LDAP server setting is incorrect.

Message	Meaning	Suggested Solution
Global Server Comm Error	This error message displays when there is a communication error between the global server and the device.	Try again. Contact a LDAP Server administrator.
Group Not Available	You have tried to select a group location number where only a single location number can be used, such as when adding locations for a Multiple Send operation.	Use a speed dial number or dial a number manually using the number keypad.
Install [xxx]	The corresponding part of the machine is not installed.	Install the part into your machine.
Invalid [xxx]	The color part of the machine is not for your machine.	Install the a Dell-genuine part designed for your machine.
Install Toner ▼	The color toner cartridge is not installed.	Install the color toner cartridge.
Invalid Toner ▼	The color toner cartridge you have installed is not for your machine.	Install the a Dell-genuine color toner cartridge designed for your machine.
Invalid Server Address	The server adress you have entered is invalid.	Enter the correct server address.
IP Conflict	The network IP address you have set is being used by someone else.	Check the IP address and reset it if necessary.
Line Busy	The receiving fax machine did not answer or the line is already engaged.	Try again after a few minutes.
Low Power	The machine is in the previous stage of the power save mode.	When data is received, it switches to on-line automatically.
Mail Exceeds Server Support	The mail size is larger than the supported size by SMTP server.	Divide your mail or reduce the resolution.
Main Motor Locked	There is a problem in the main motor.	Open and then close the front cover.
Load Manually Press Start Key	The multi-purpose tray is empty in manual feed mode.	Load paper in the multi-purpose tray.
Memory Full	The memory is full.	Delete unnecessary fax jobs and retransmit after more memory becomes available. Alternatively, split the transmission into more than one operation.
MP Tray Paper Jam 0	Paper has jammed in the feeding area of the multi-purpose tray.	Clear the jam.
Network Error	There is a problem with the network.	Contact your network administrator.
Not Assigned	The speed button or speed dial number you tried to use has no number assigned to it.	Enter the number manually using the number keypad or store the number or address.

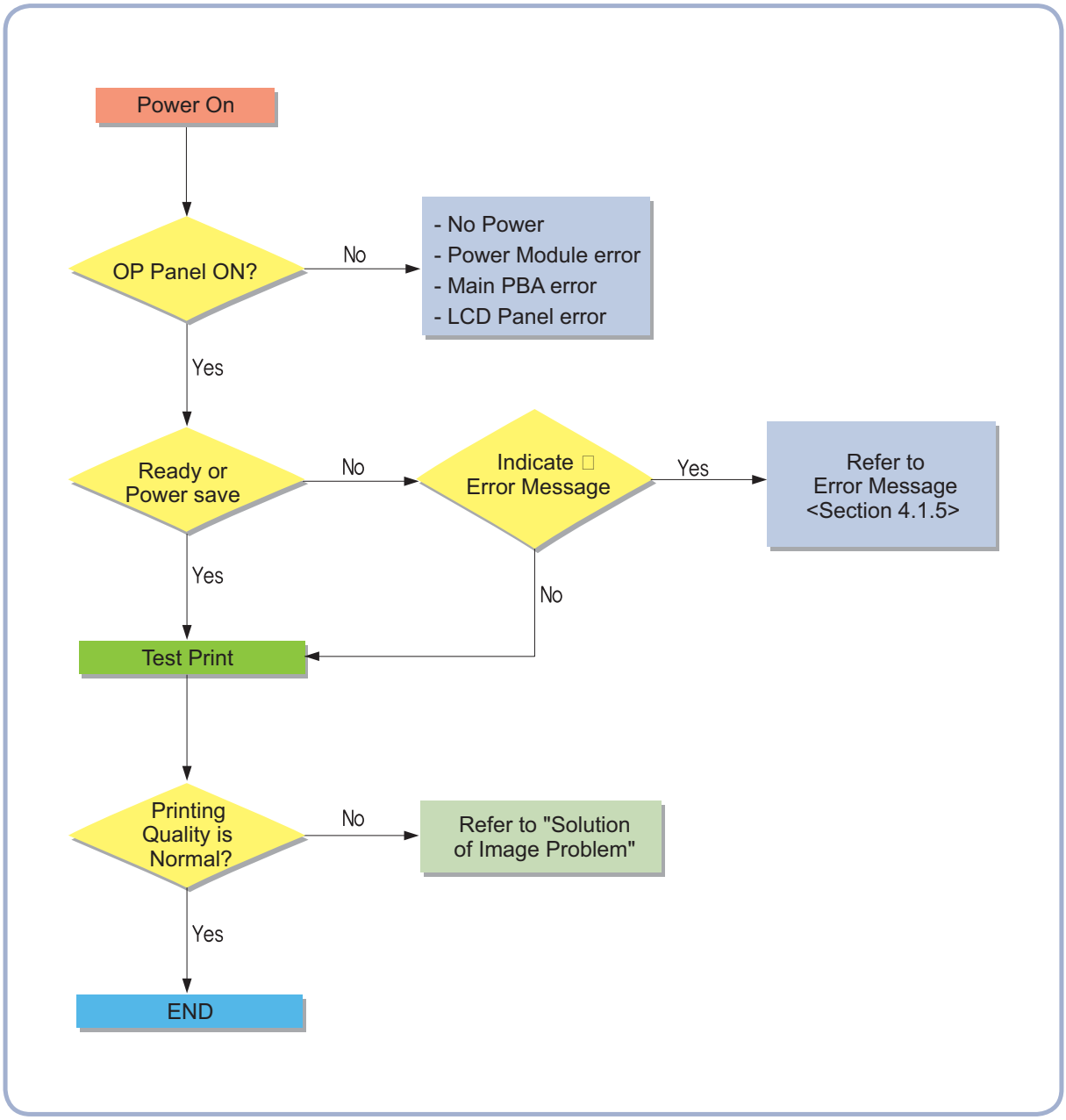
Message	Meaning	Suggested Solution
Not Available Try Again Later	Can not perform the task immediately because too many tasks are running at once.	Try again when current task is completed.
Non DELL Toner ▼	The color toner cartridge which the arrow indicates is not a Dell-genuine cartridge. Press OK to toggle the message to Stop or Continue. ◀ Stop ▶	You can select either Stop or Continue with the left/right arrow. If you select Stop by pressing OK on the control panel, the machine stops printing. If you select Continue, the machine keeps printing, but the quality cannot be guaranteed. If you do not select any, the machine will work as Stop is selected. Replace the corresponding toner cartridge with a Dell-genuine cartridge.
One Page is Too Large	Single page data exceeds the configured mail size.	Reduce the resolution and try again.
Operation Not Assigned	You are in the Add Page/Cancel Job operation, but there are no jobs stored.	Check the display to see if there are any scheduled jobs.
Out-Bin Full	The output tray of the machine is full of paper.	Remove paper.
Paper Jam 0 Open/Close Door	Paper has jammed in the feeding area of the tray.	Clear the jam.
Paper Jam 1 Open/Close Door	Paper has jammed inside the machine.	Clear the jam.
Paper Jam 2 Check Inside	Special print media has jammed in the paper exit area.	Clear the jam.
Power Failure	Power has turned off then on and the machine's memory has not been back up.	The job which you were trying to do before the power failure must be completely re-done.
Remove Paper in Rear Cover	Paper has jammed in the paper rear cover area.	Clear the jam.
Refilled Toner ▼	The toner cartridge you have installed is not genuine or refilled.	The print quality may get poor if the refilled toner cartridge is installed, since its characteristics may significantly differ from the genuine. We recommend Dell-genuine color toner cartridge.
Replace Toner ▼	This message appears between Toner Empty and Toner Low status.	Replace the toner cartridge with a new one.
Replace [xxx]	The life of the part expires totally.	Replace the part with a new one.
Replace [xxx] Soon	The life of the part expires soon.	Replace the part with a new one.
Retry Redial?	The machine is waiting for a specified time interval to redial a previously busy station.	You can press OK to immediately redial, or Stop/Clear to cancel the redial operation.

Message	Meaning	Suggested Solution
Reverse Jam 0 Check Inside	Paper has jammed in the paper fuser area and In the cover of reverse unit area.	Clear the jam.
Reverse Jam 1 Check Inside	Paper has jammed In the cover of reverse unit area or in the rear cover.	Clear the jam.
Scanner locked	The scanner module is locked	Unlock the scanner and press Stop/Clear.
Self Diagnostics Temperature	The engine in your machine is checking problems detected.	Wait a few minutes.
Self Diagnostics LSU	The LSU (Laser Scanning Unit) in your machine is checking problems detected.	Wait a few minutes.
Send Error (AUTH)	There is a problem in SMTP authentication.	Configure the authentication setting.
Send Error (DNS)	There is a problem in DNS.	Configure the DNS setting.
Send Error (POP3)	There is a problem in POP3.	Configure the POP3 setting.
Send Error (SMTP)	There is a problem in SMTP.	Change to the available server.
Send Error (Wrong Config)	There is a problem on the network interface card.	Configure your network interface card correctly.
Toner Empty ▼	The color toner cartridge has run out. The machine stops printing. Press OK to toggle the message to Stop, Continueor Black Only. ◀ Stop ▶ If the black toner cartridge is empty, Black Only messagedoes not appear.	You can select the option among Stop, ontinue or Black Only with the left/right arrow. If you select Stop by pressing OK on the control panel, the machine stops printing. If you select Continue, the machine keeps printing, but the quality cannot be guaranteed. If you select Black Only, the machine prints the data in black. In this case, the mono printing feature is preset in the printer properties. When you copy, the Black Start button will be activated only with this condition. If you do not select any, the machine will work as Stop is selected. Replace the color toner cartridge with a new one.
Toner Exhausted ▼	The lifespan of the color toner cartridge which the arrow indicates is reached.	This message appears when the toner is completely empty, and your machine stops printing. Replace the corresponding toner cartridge with a □□□genuine cartridge.
Toner Low ▼	The corresponding color toner cartridge is almost empty.	Take out the toner cartridge and thoroughly shake it. By doing this, you can temporarily reestablish printing operations.
Tray 2 Paper jam 0	Paper has jammed In the paper feed area.	Clear the jam.

4.2 Troubleshooting

4.2.1 Procedure of Checking the Symptoms

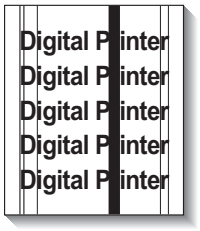
Before attempting to repair the printer first obtain a detailed description of the problem from the customer.

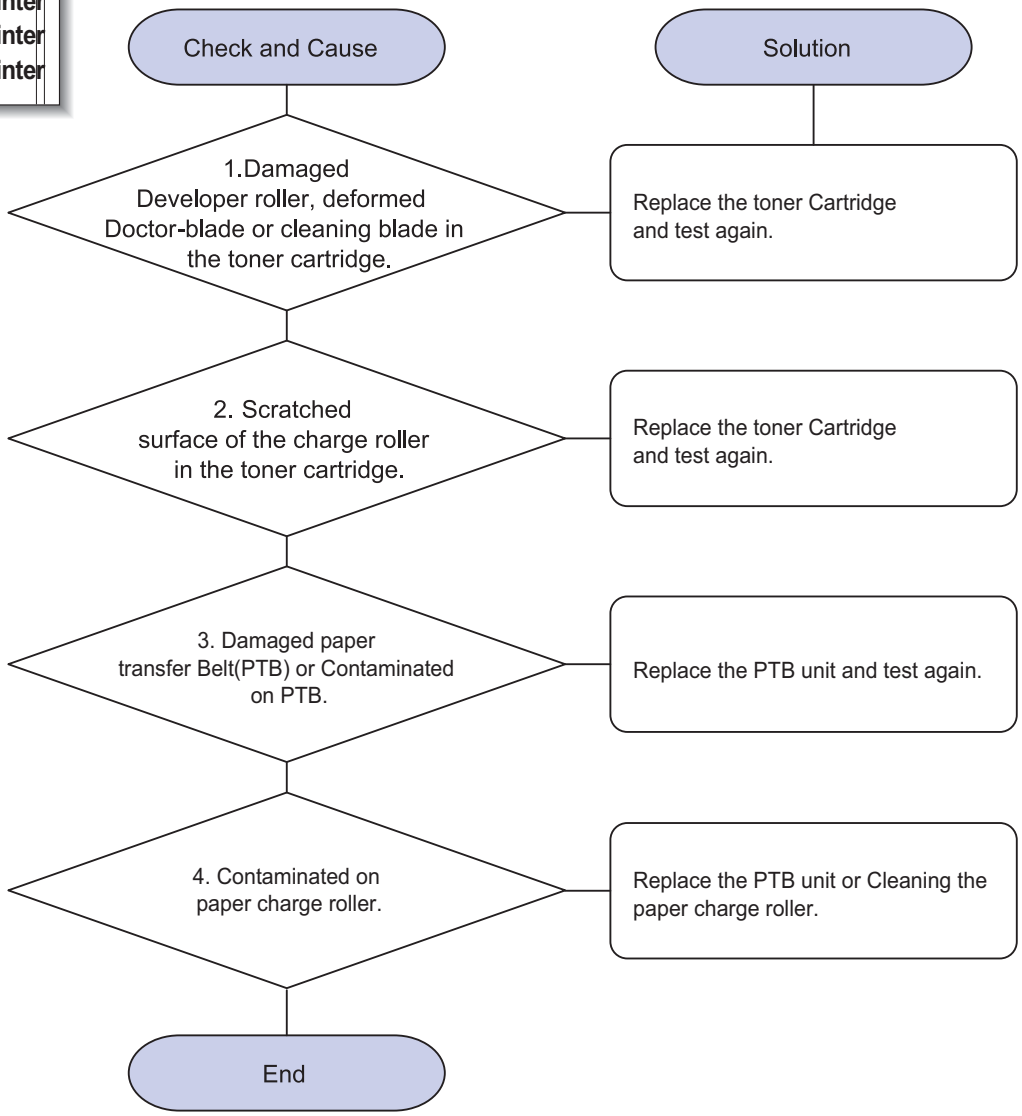


4.2.2 Image quality problems

1) Vertical Black Line and Band

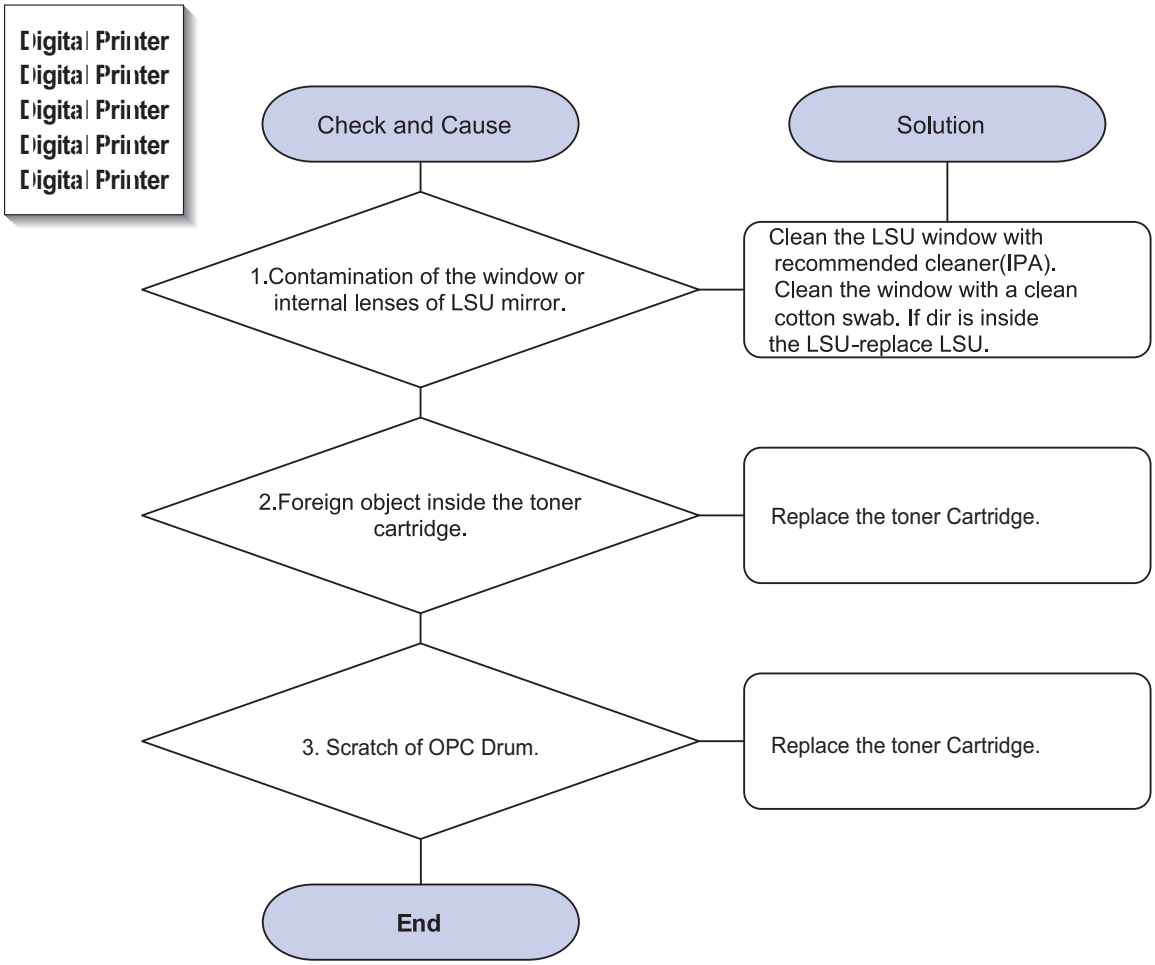
Description	1. Straight thin black vertical lines are shown in the print-out. 2. Dark black vertical bands are shown in the print-out.




Check and Cause
Solution
1.Damaged Developer roller, deformed Doctor-blade or cleaning blade in the toner cartridge.
Replace the toner Cartridge and test again.
2. Scratched surface of the charge roller in the toner cartridge.
Replace the toner Cartridge and test again.
3. Damaged paper transfer Belt(PTB) or Contaminated on PTB.
Replace the PTB unit and test again.
4. Contaminated on paper charge roller.
Replace the PTB unit or Cleaning the paper charge roller.
End

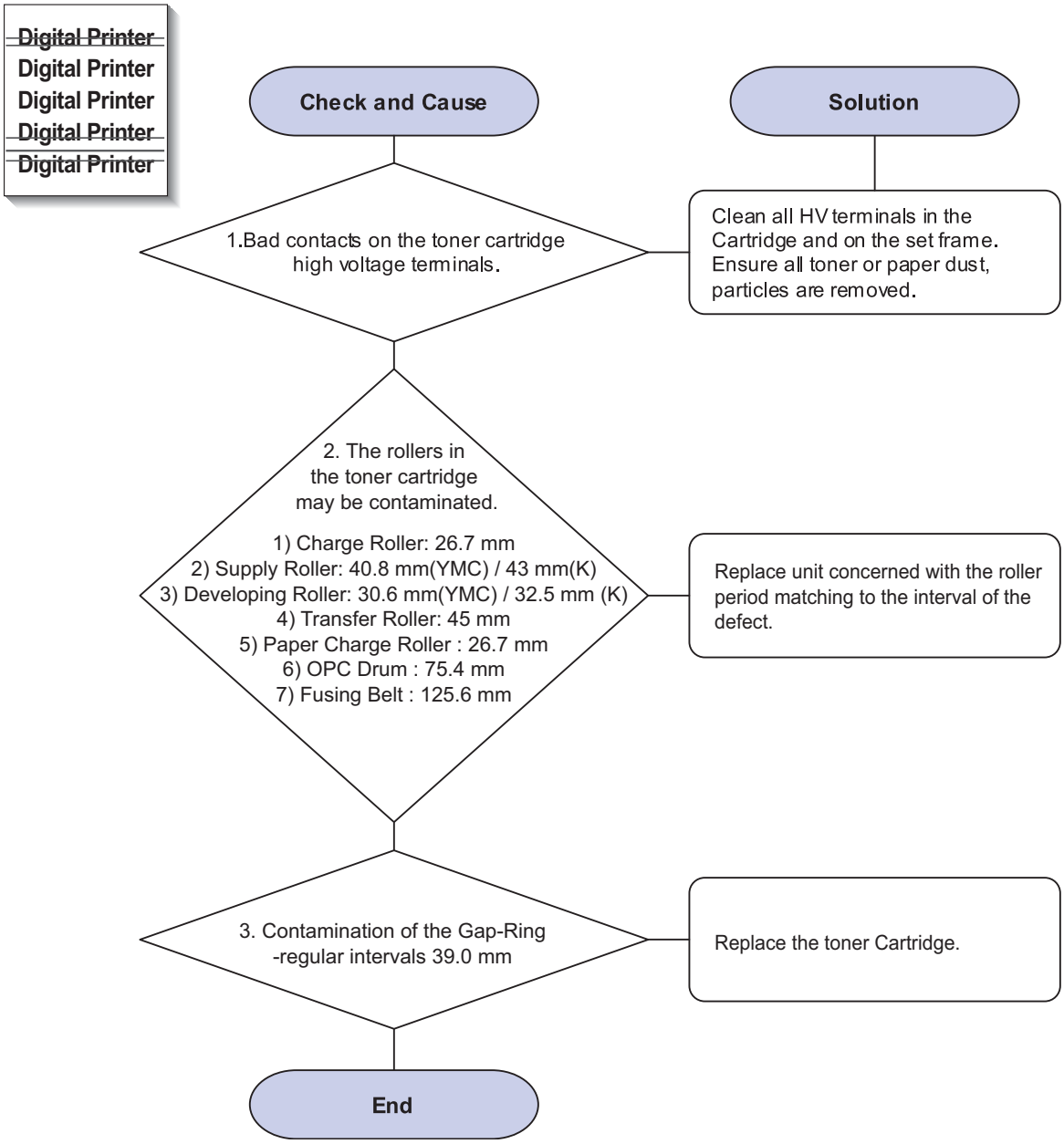
2) Vertical White Line

Description	White vertical voids in the image.


Digital Printer
Digital Printer
Digital Printer
Digital Printer
Digital Printer
Check and Cause
Solution
1.Contamination of the window or internal lenses of LSU mirror.
Clean the LSU window with recommended cleaner(IPA). Clean the window with a clean cotton swab. If dir is inside the LSU-replace LSU.
2.Foreign object inside the toner cartridge.
Replace the toner Cartridge.
3. Scratch of OPC Drum.
Replace the toner Cartridge.
End

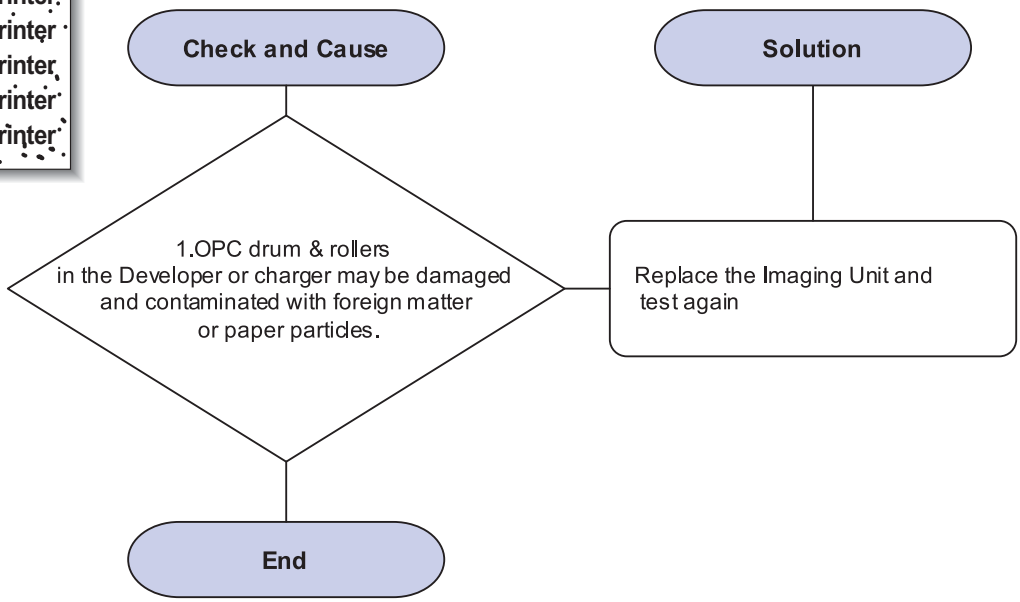
3) Horizontal Black Bands

Description	Dark or blurry horizontal stripes occur in the printing periodically (These may occurs at regular intervals down the page.)


Digital Printer
Digital Printer
Digital Printer
Digital Printer
Digital Printer
Check and Cause
Solution
1.Bad contacts on the toner cartridge high voltage terminals.
Clean all HV terminals in the Cartridge and on the set frame. Ensure all toner or paper dust, particles are removed.
2. The rollers in the toner cartridge may be contaminated.
1) Charge Roller: 26.7 mm
2) Supply Roller: 40.8 mm(YMC) / 43 mm(K)
3) Developing Roller: 30.6 mm(YMC) / 32.5 mm (K)
4) Transfer Roller: 45 mm
5) Paper Charge Roller : 26.7 mm
6) OPC Drum : 75.4 mm
7) Fusing Belt : 125.6 mm
Replace unit concerned with the roller period matching to the interval of the defect.
3. Contamination of the Gap-Ring -regular intervals 39.0 mm
Replace the toner Cartridge.
End

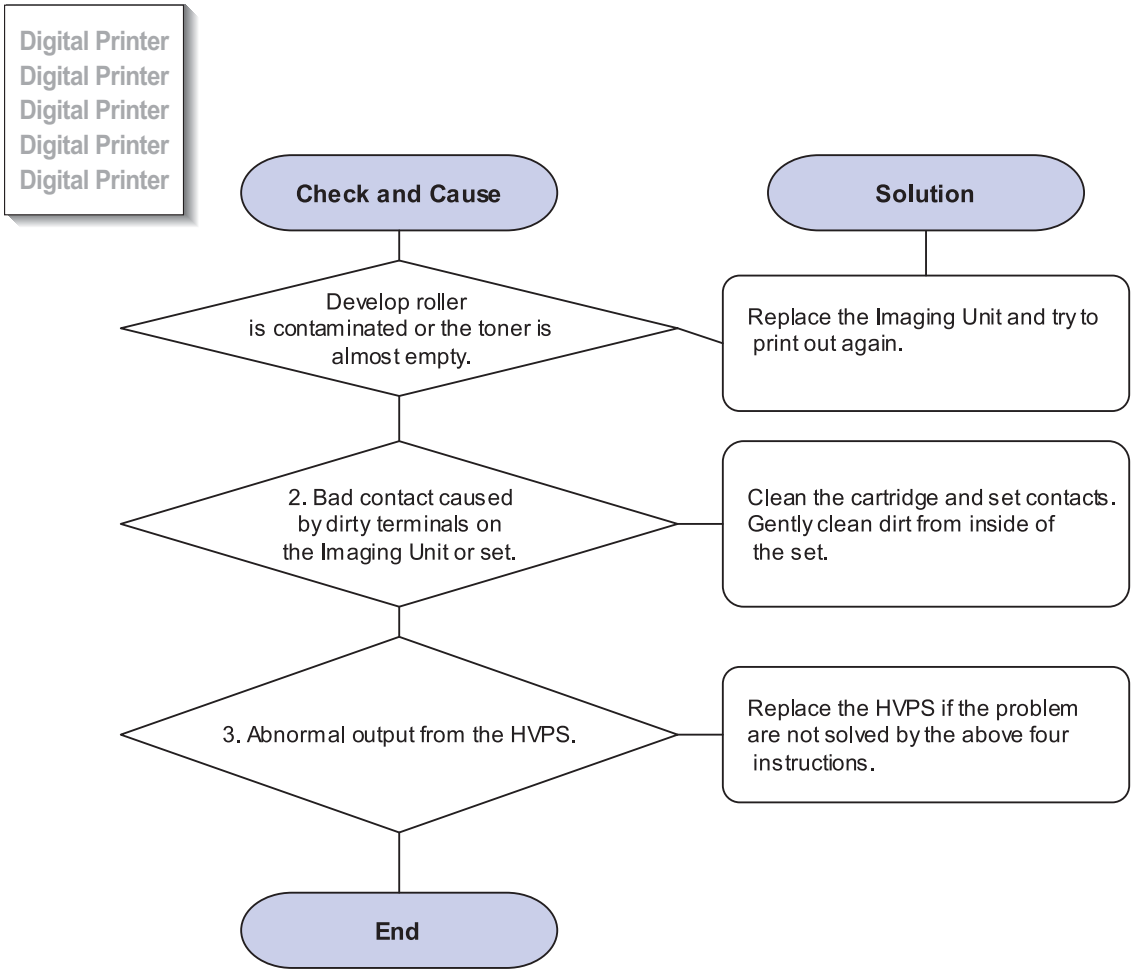
4) Black/White Spot

Description	1. Dark or blurry spots occur periodically in the printing 2. White spots occur periodically in the printing



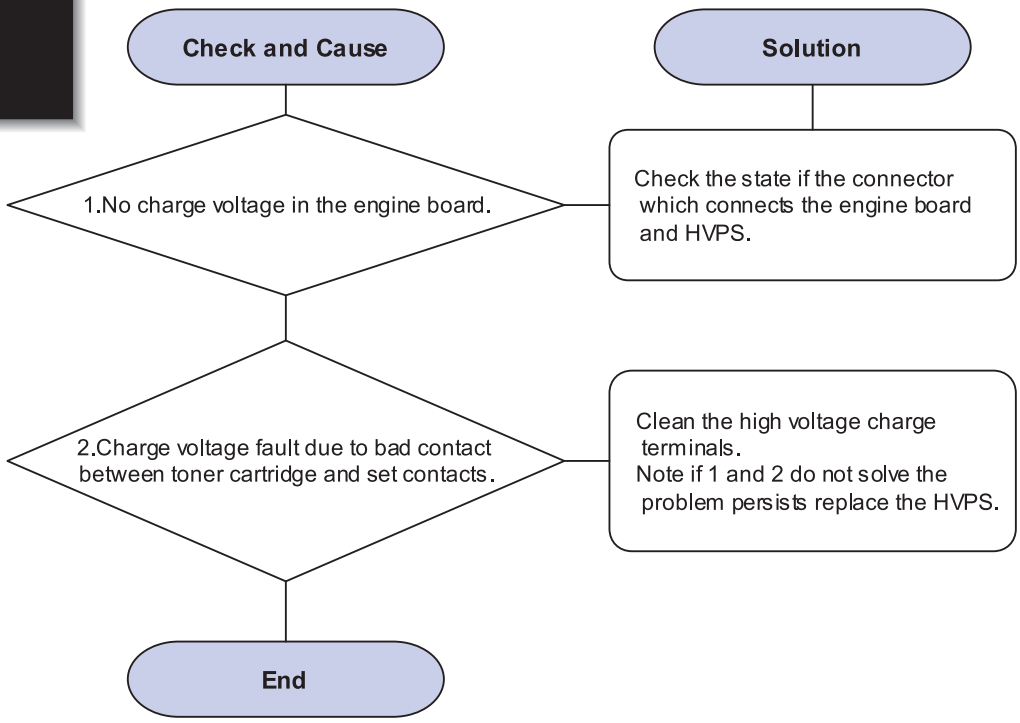
5) Light Image

Description	The printed image is light, with no ghost.


Digital Printer
Digital Printer
Digital Printer
Digital Printer
Digital Printer
Check and Cause
Solution
Develop roller is contaminated or the toner is almost empty.
Replace the Imaging Unit and try to print out again.
2. Bad contact caused by dirty terminals on the Imaging Unit or set.
Clean the cartridge and set contacts. Gently clean dirt from inside of the set.
3. Abnormal output from the HVPS.
Replace the HVPS if the problem are not solved by the above four instructions.
End

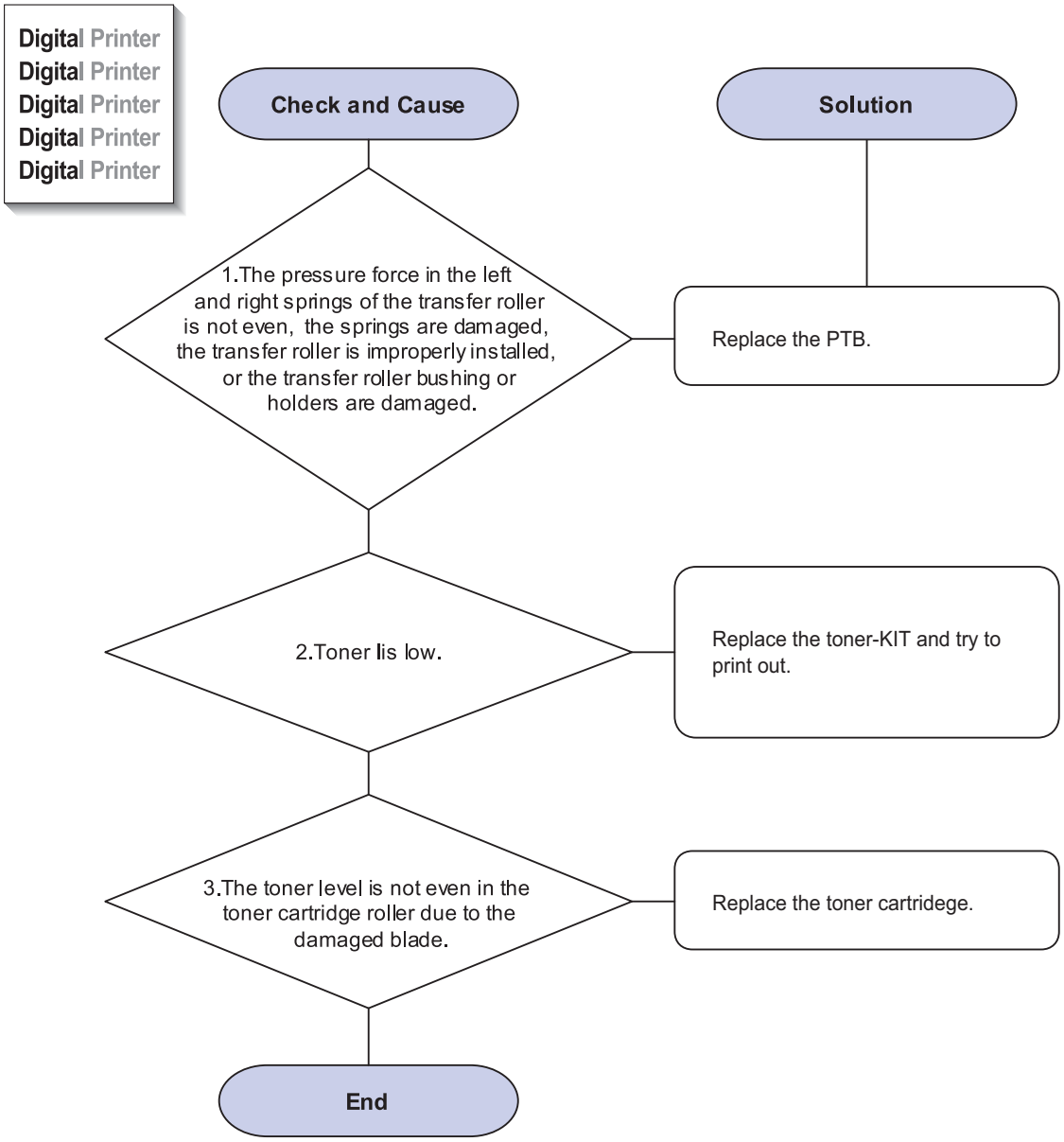
6) Dark image or Black

Description	The printed image is dark.


Check and Cause
Solution
1.No charge voltage in the engine board.
Check the state if the connector which connects the engine board and HVPS.
2.Charge voltage fault due to bad contact between toner cartridge and set contacts.
Clean the high voltage charge terminals.
Note if 1 and 2 do not solve the problem persists replace the HVPS.
End

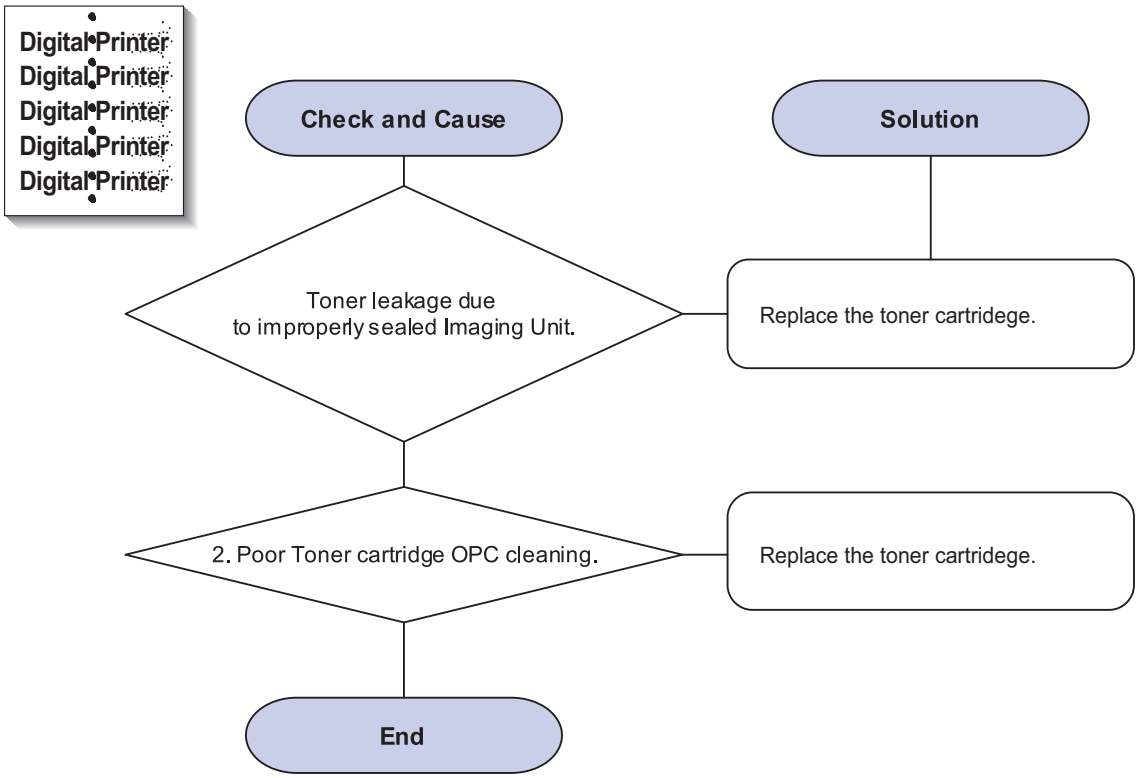
7) Uneven Density

Description	Print Density is uneven between left and right.


Digital Printer
Digital Printer
Digital Printer
Digital Printer
Digital Printer
Check and Cause
Solution
1.The pressure force in the left and right springs of the transfer roller is not even, the springs are damaged, the transfer roller is improperly installed, or the transfer roller bushing or holders are damaged.
Replace the PTB.
2.Toner lis low.
Replace the toner-KIT and try to print out.
3.The toner level is not even in the toner cartridge roller due to the damaged blade.
Replace the toner cartridege.
End

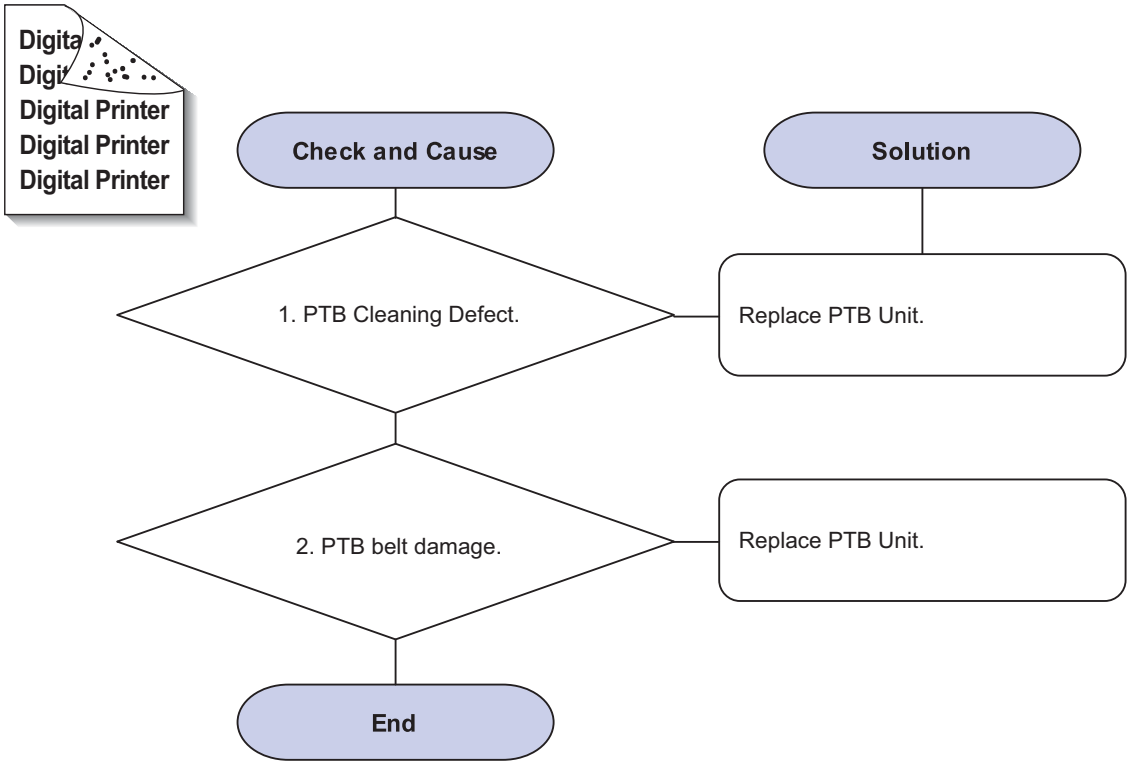
8) Strain in the Face of the Page

Description	The background on the face of the printed page strained



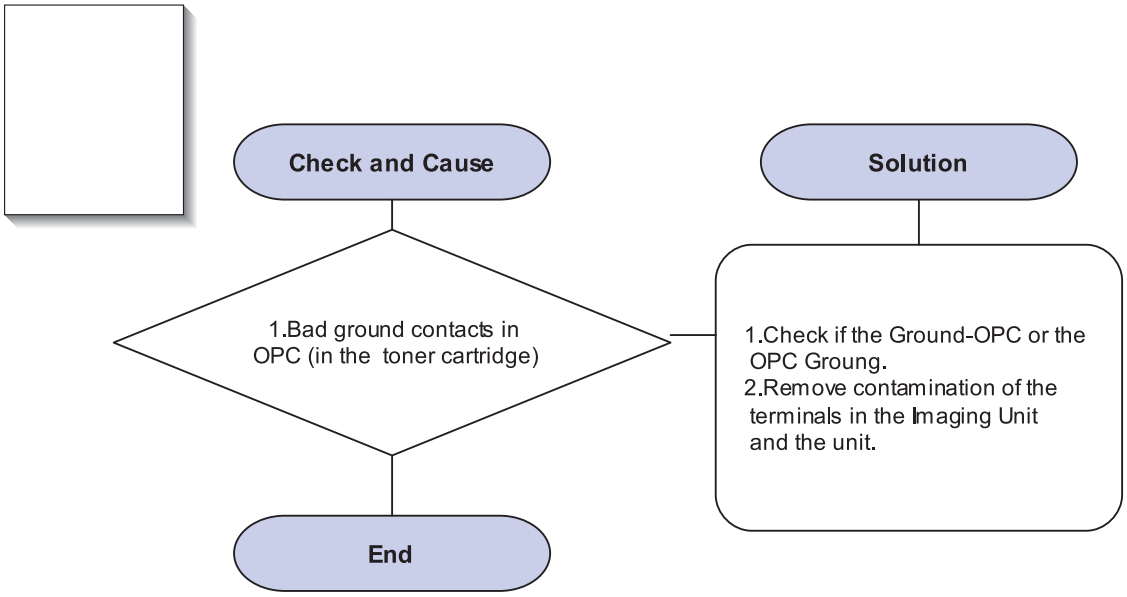
9) Strains on Back of Page

Description	The back of the page is strained at 43.9 or 75.5 mm intervals.



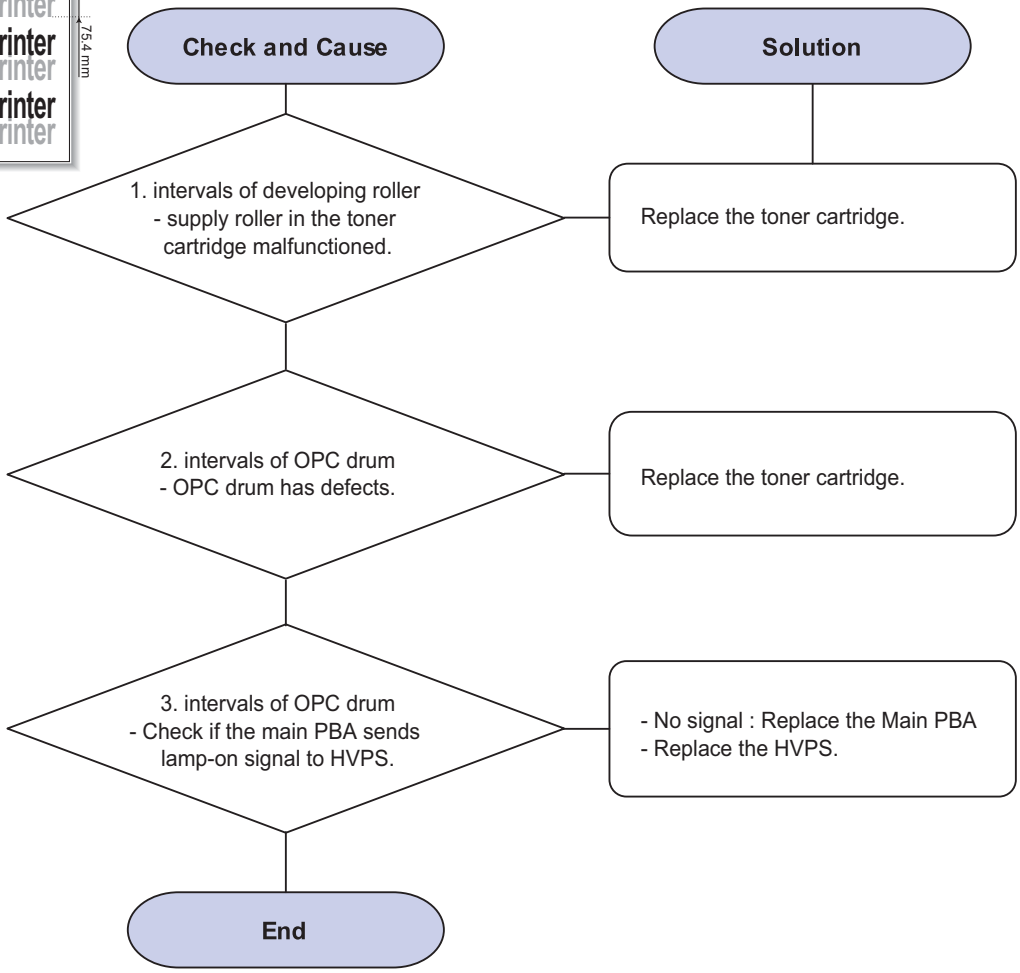
10) Blank Page Print out(1)

Description	Blank page is printed.


Check and Cause
Solution
1.Bad ground contacts in OPC (in the toner cartridge)
1.Check if the Ground-OPC or the OPC Groung.
2.Remove contamination of the terminals in the Imaging Unit and the unit.
End

11) Ghost

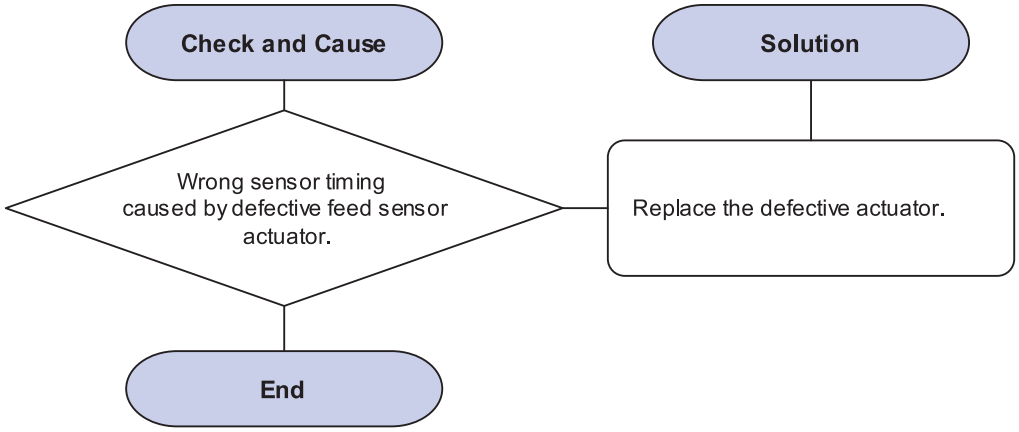
Description	Ghost occur at 75.4mm intervals of the OPC drum or intervals of the developing roller in the whole printing.


Check and Cause
Solution
1. intervals of developing roller
- supply roller in the toner
cartridge malfunctioned.
Replace the toner cartridge.
2. intervals of OPC drum
- OPC drum has defects.
Replace the toner cartridge.
3. intervals of OPC drum
- Check if the main PBA sends
lamp-on signal to HVPS.
- No signal : Replace the Main PBA
- Replace the HVPS.
End

4.2.3 Paper feed problems

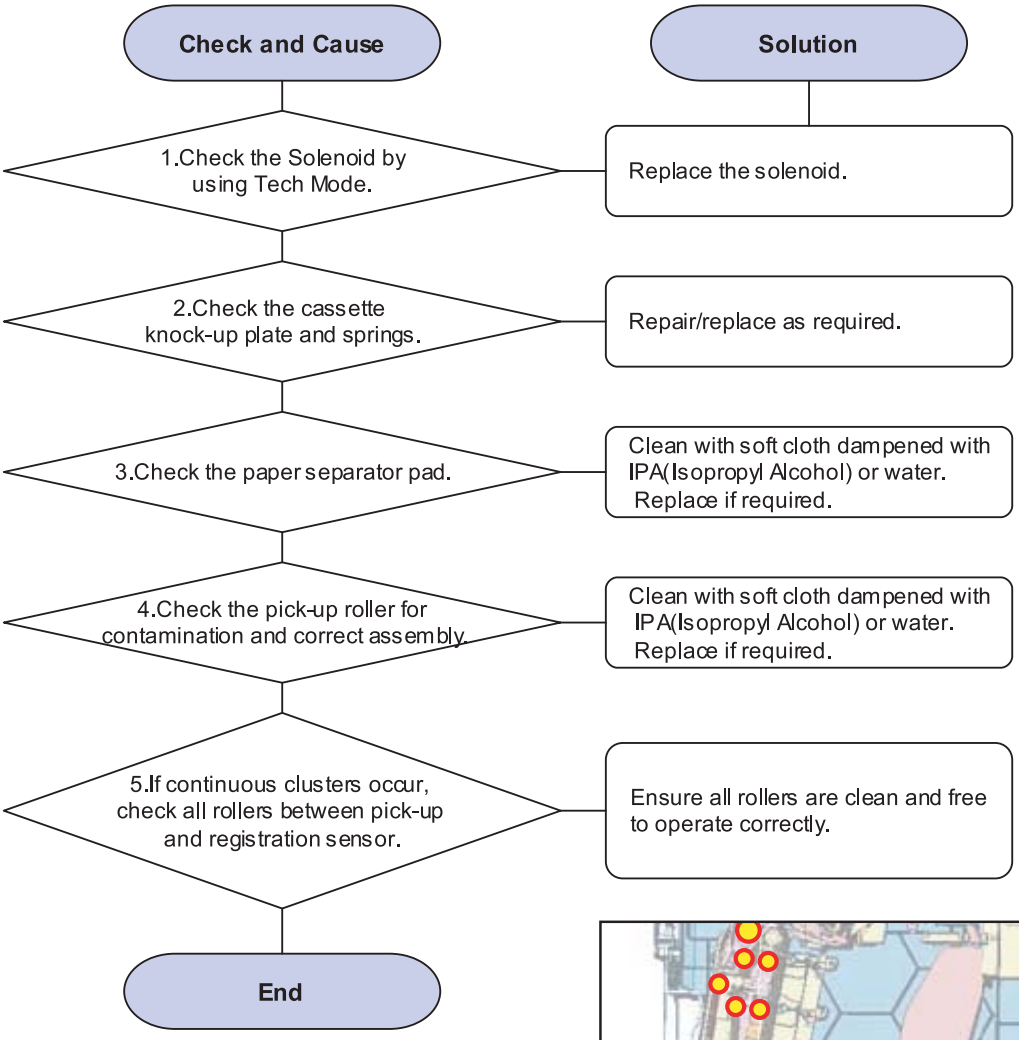
1) Wrong Print Position

Description	Printing begins at wrong position on the paper.



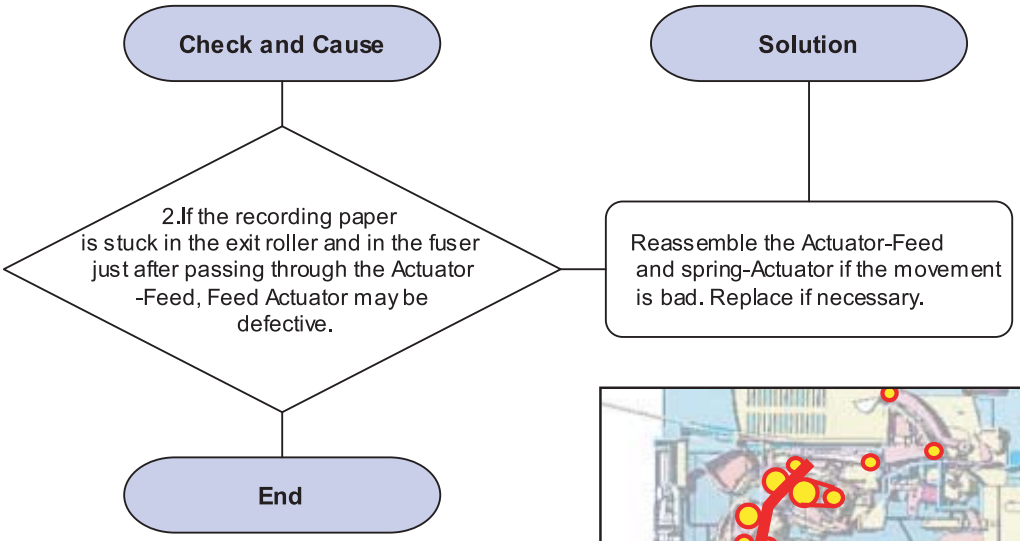
2) JAM 0

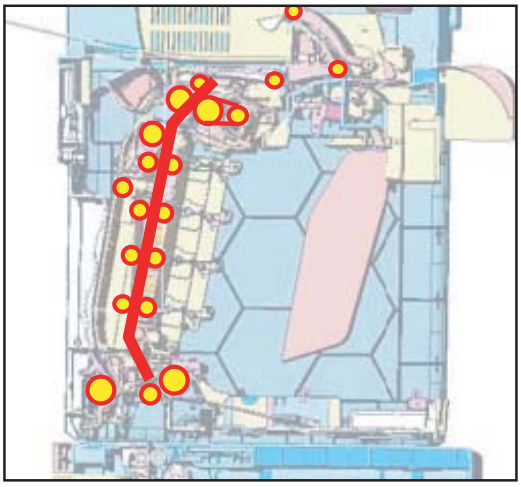
Description	1. Paper does not exit from the cassette. 2. Jam-0 occurs when the paper feeds into the printer


Check and Cause
Solution
1.Check the Solenoid by using Tech Mode.
Replace the solenoid.
2.Check the cassette knock-up plate and springs.
Repair/replace as required.
3.Check the paper separator pad.
Clean with soft cloth dampened with IPA(Isopropyl Alcohol) or water. Replace if required.
4.Check the pick-up roller for contamination and correct assembly.
Clean with soft cloth dampened with IPA(Isopropyl Alcohol) or water. Replace if required.
5.If continuous clusters occur, check all rollers between pick-up and registration sensor.
Ensure all rollers are clean and free to operate correctly.
End

3) JAM 1

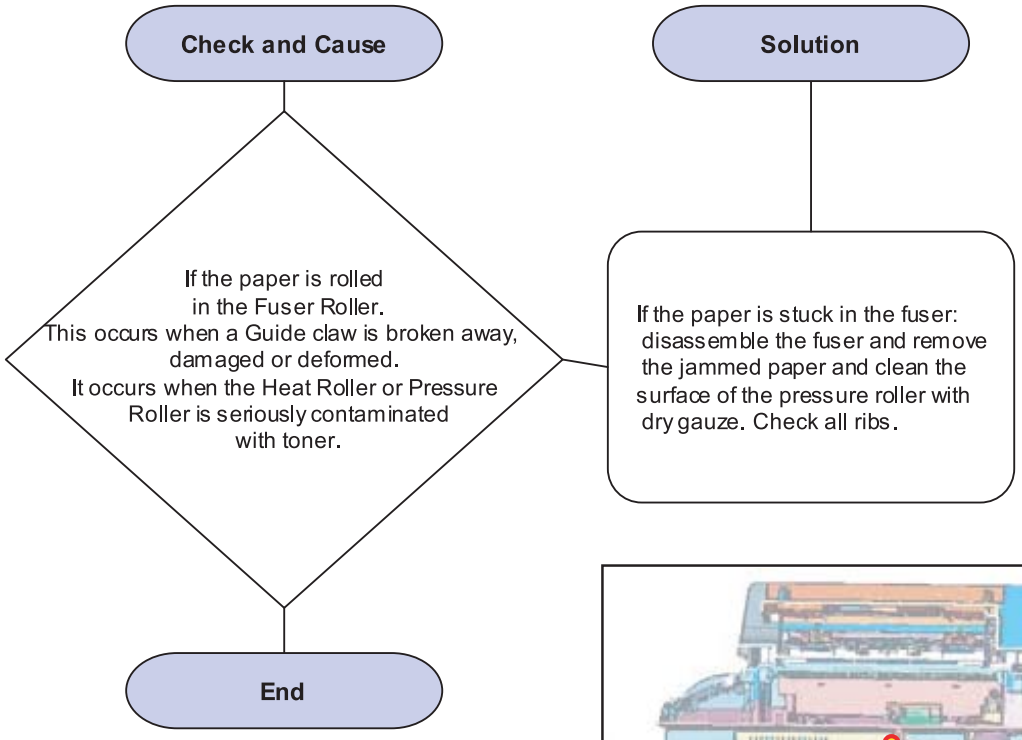
Description	1. Paper is jammed in front of or inside the fuser. 2. Paper is stuck in the exit roller and in the fuser just after passing through the Actuator-Feed

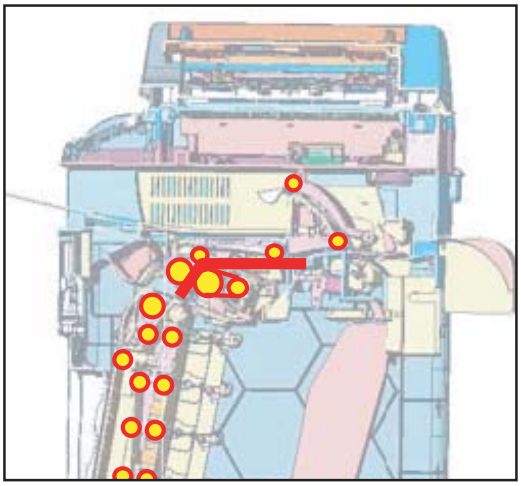

Check and Cause
Solution
2.If the recording paper is stuck in the exit roller and in the fuser just after passing through the Actuator -Feed, Feed Actuator may be defective.
Reassemble the Actuator-Feed and spring-Actuator if the movement is bad. Replace if necessary.
End



4) JAM 2

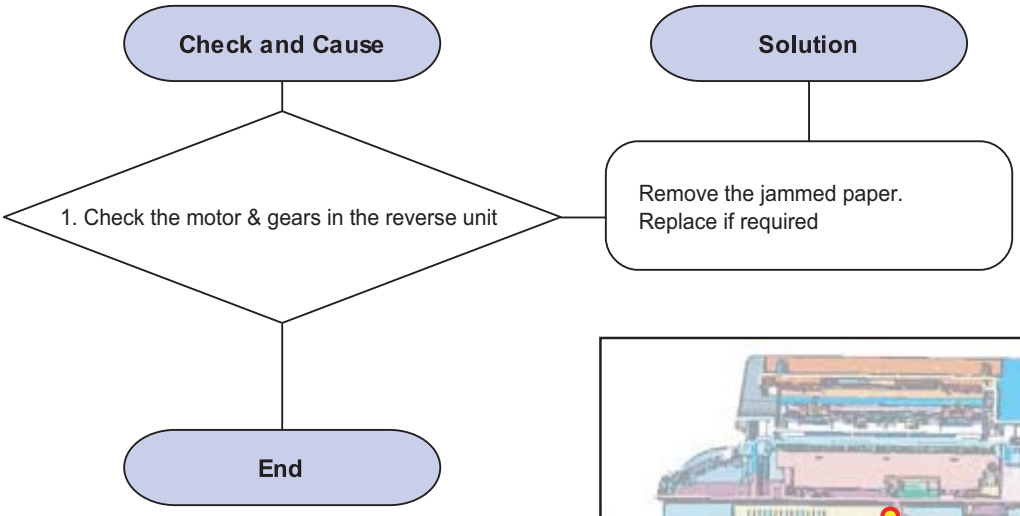
Description	1. Recording paper is jammed in front of or inside the fuser. 2. Recording paper is stuck in the discharge roller and in the fuser just after passing through the Actuator-Feed.

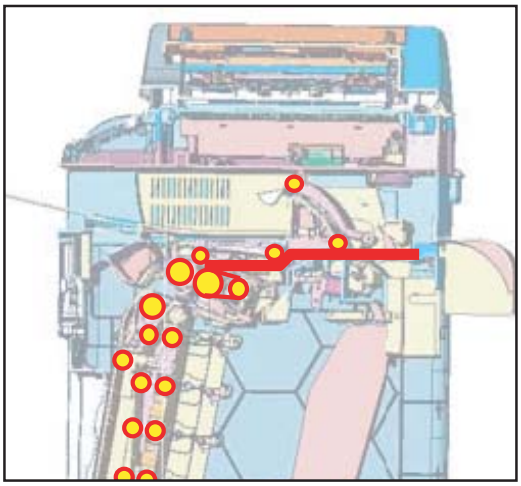

Check and Cause
Solution
If the paper is rolled
in the Fuser Roller.
This occurs when a Guide claw is broken away,
damaged or deformed.
It occurs when the Heat Roller or Pressure
Roller is seriously contaminated
with toner.
If the paper is stuck in the fuser:
disassemble the fuser and remove
the jammed paper and clean the
surface of the pressure roller with
dry gauze. Check all ribs.
End



5) Reverse JAM 0

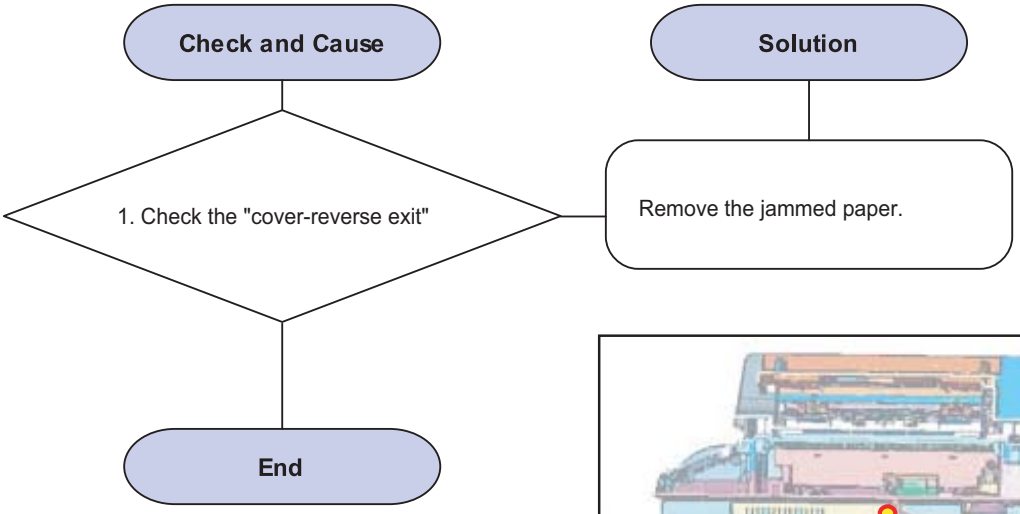
Description	1. Paper is jammed in front of or inside the reverse unit. 2. Paper is stuck in the fuser exit roller and in the reverse unit just after passing through the Actuator

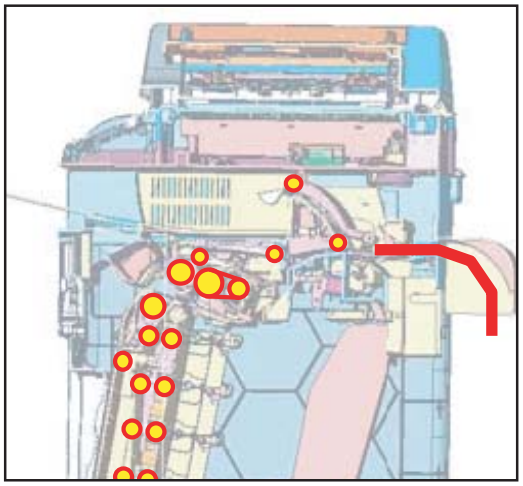




6) Rear Cover

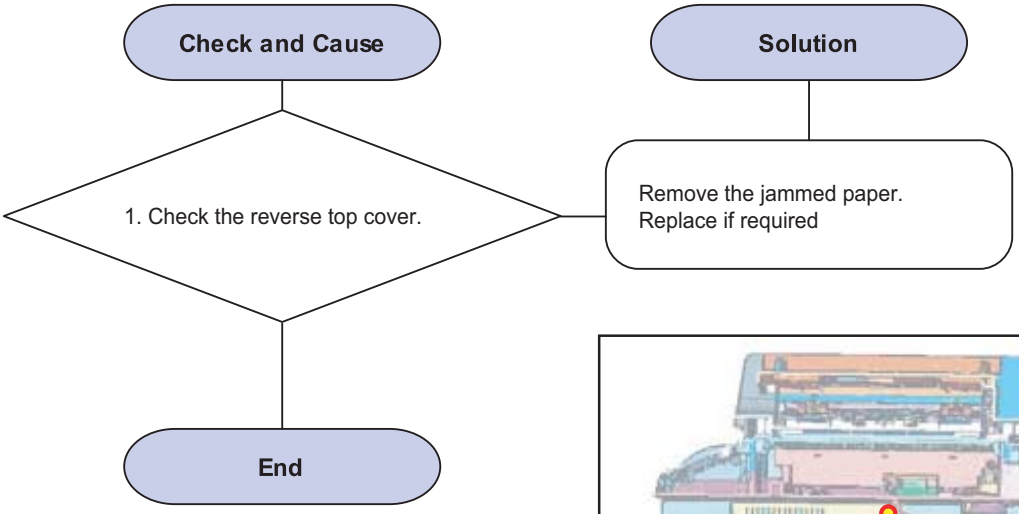
Description	Paper is stuck in the rear cover

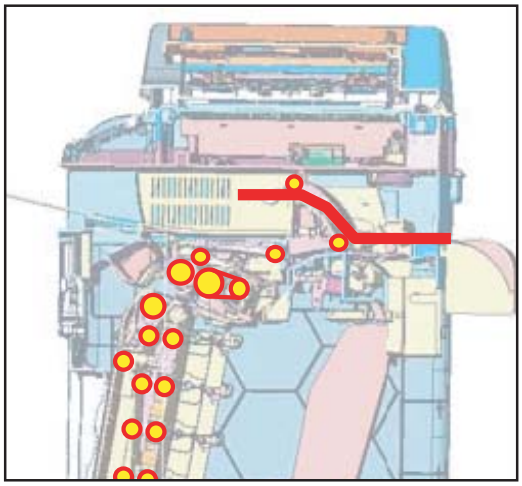




7) Reverse JAM 1

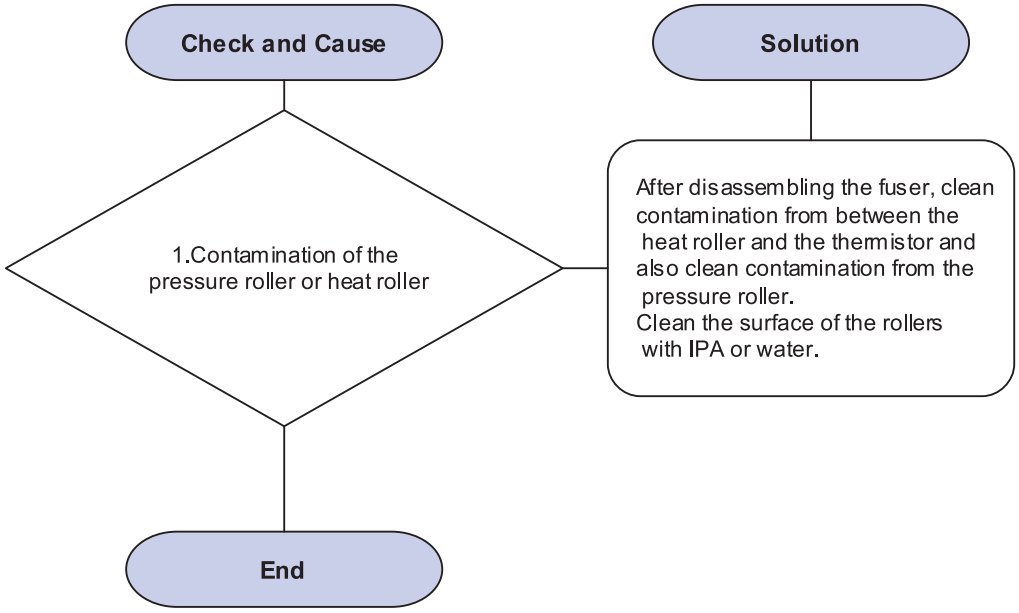
Description	Paper is jammed in front of the reverse exit roller or inside the reverse unit.





8) Paper rolled in the fuser

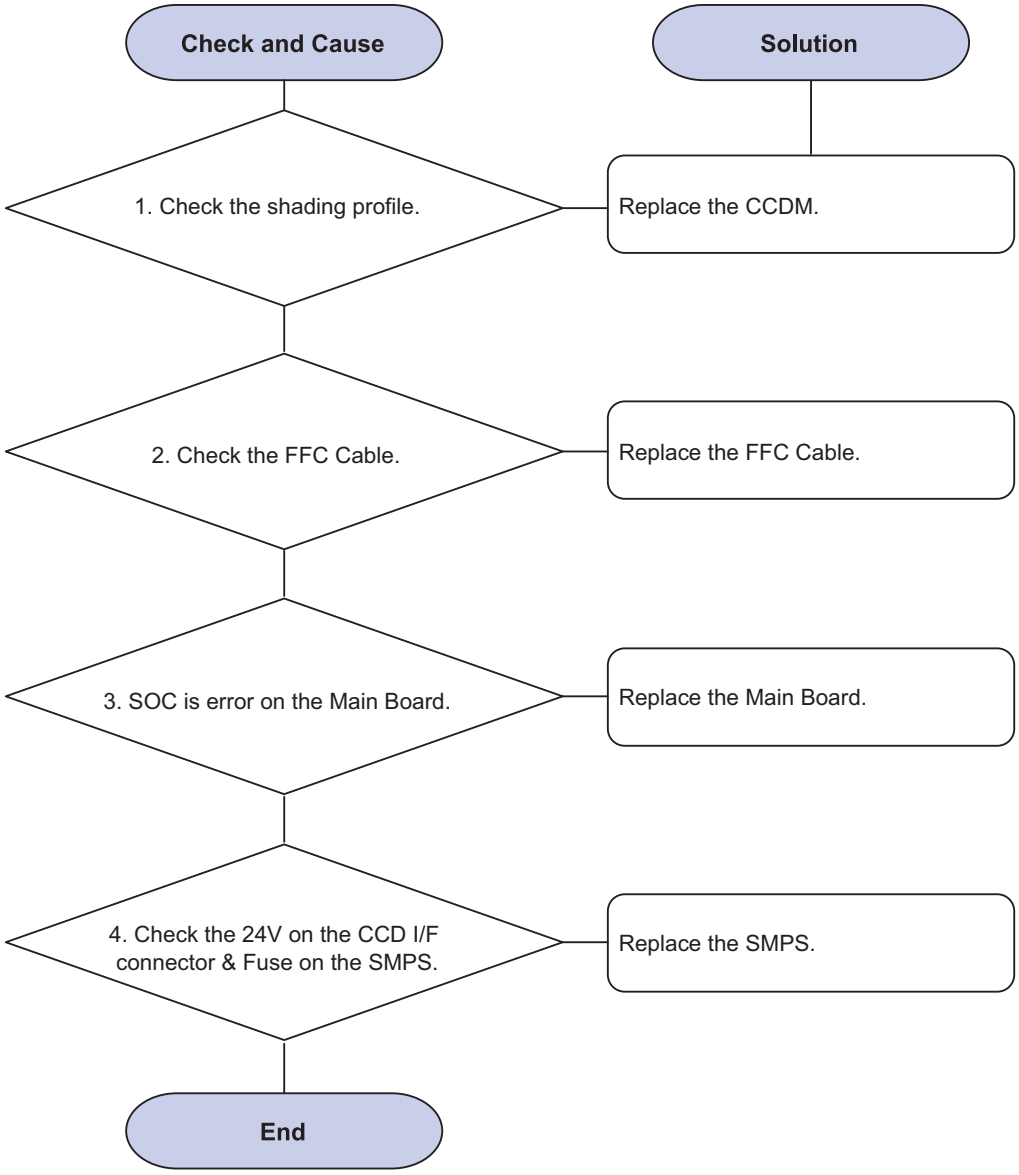
Description	Paper rolled around fuser rollers or 'Concertina' jam


Check and Cause
Solution
1.Contamination of the pressure roller or heat roller
After disassembling the fuser, clean contamination from between the heat roller and the thermistor and also clean contamination from the pressure roller.
Clean the surface of the rollers with IPA or water.
End

4.2.4 Copy Problems

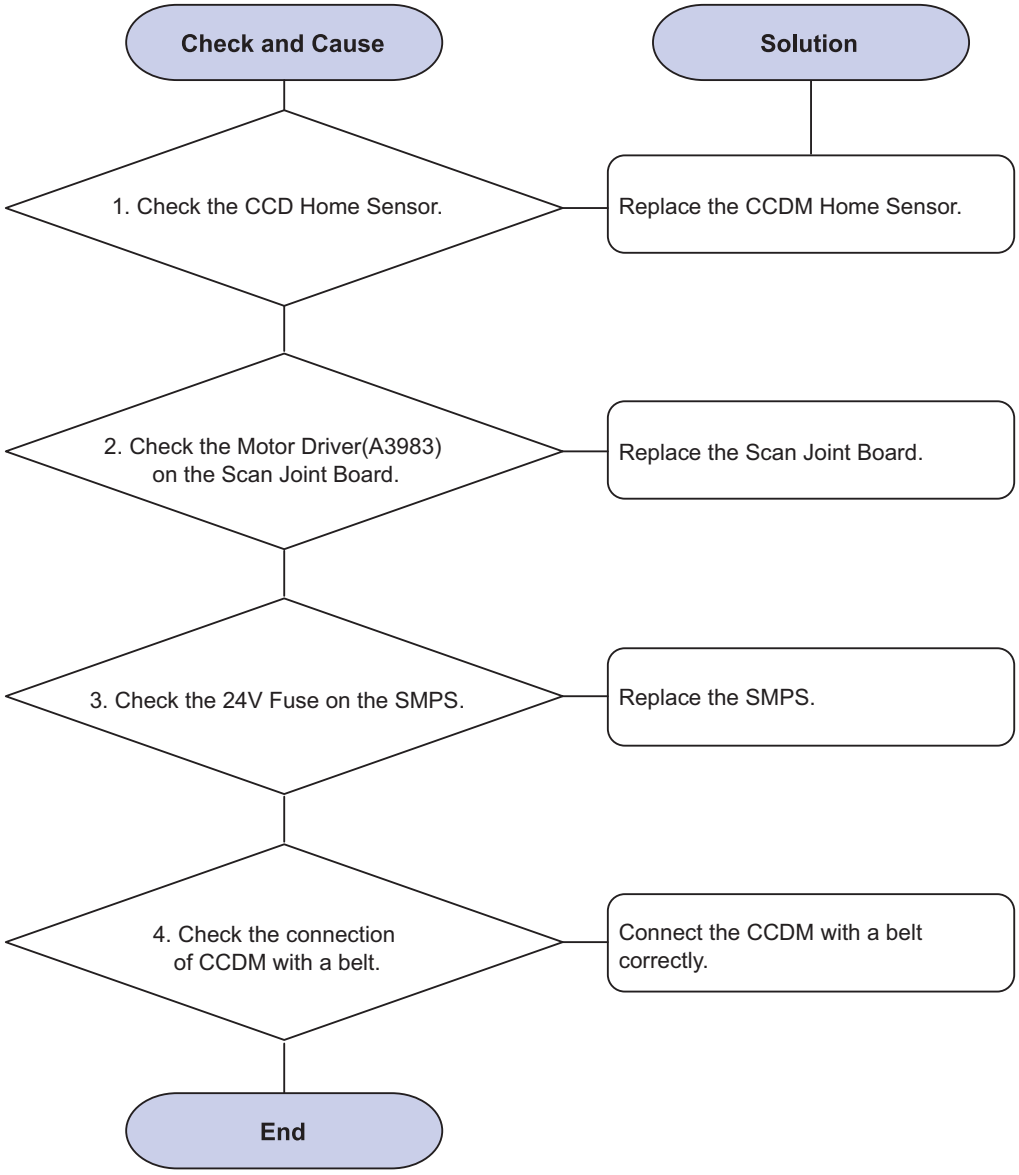
1) Defective Image Quality

Description	1. Background occured or Copy quality is not good. 2. CCDM Lamp do not turn on.


Check and Cause
Solution
1. Check the shading profile.
Replace the CCDM.
2. Check the FFC Cable.
Replace the FFC Cable.
3. SOC is error on the Main Board.
Replace the Main Board.
4. Check the 24V on the CCD I/F connector & Fuse on the SMPS.
Replace the SMPS.
End

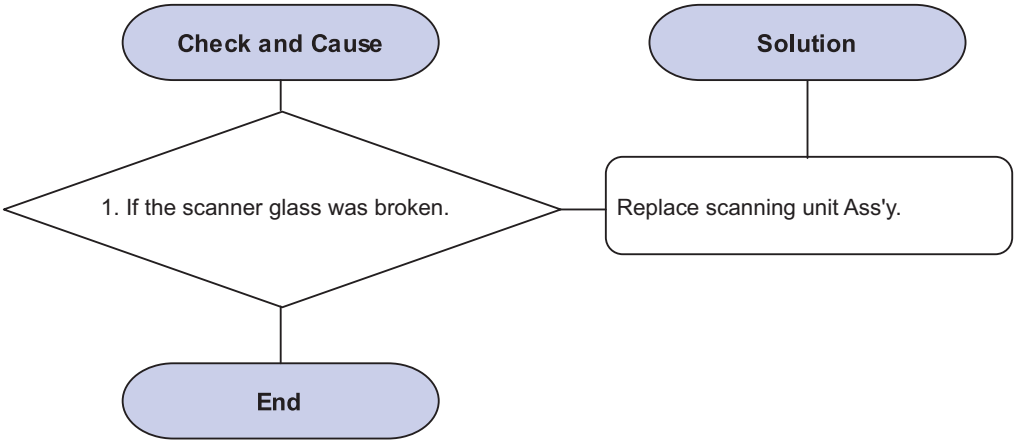
2) Scan Lock Error

Description	CCDM do not move and displayed 'Scanner Lock' on the LCD Panel.


Check and Cause
Solution
1. Check the CCD Home Sensor.
Replace the CCDM Home Sensor.
2. Check the Motor Driver(A3983) on the Scan Joint Board.
Replace the Scan Joint Board.
3. Check the 24V Fuse on the SMPS.
Replace the SMPS.
4. Check the connection of CCDM with a belt.
Connect the CCDM with a belt correctly.
End

3) Glass Broken

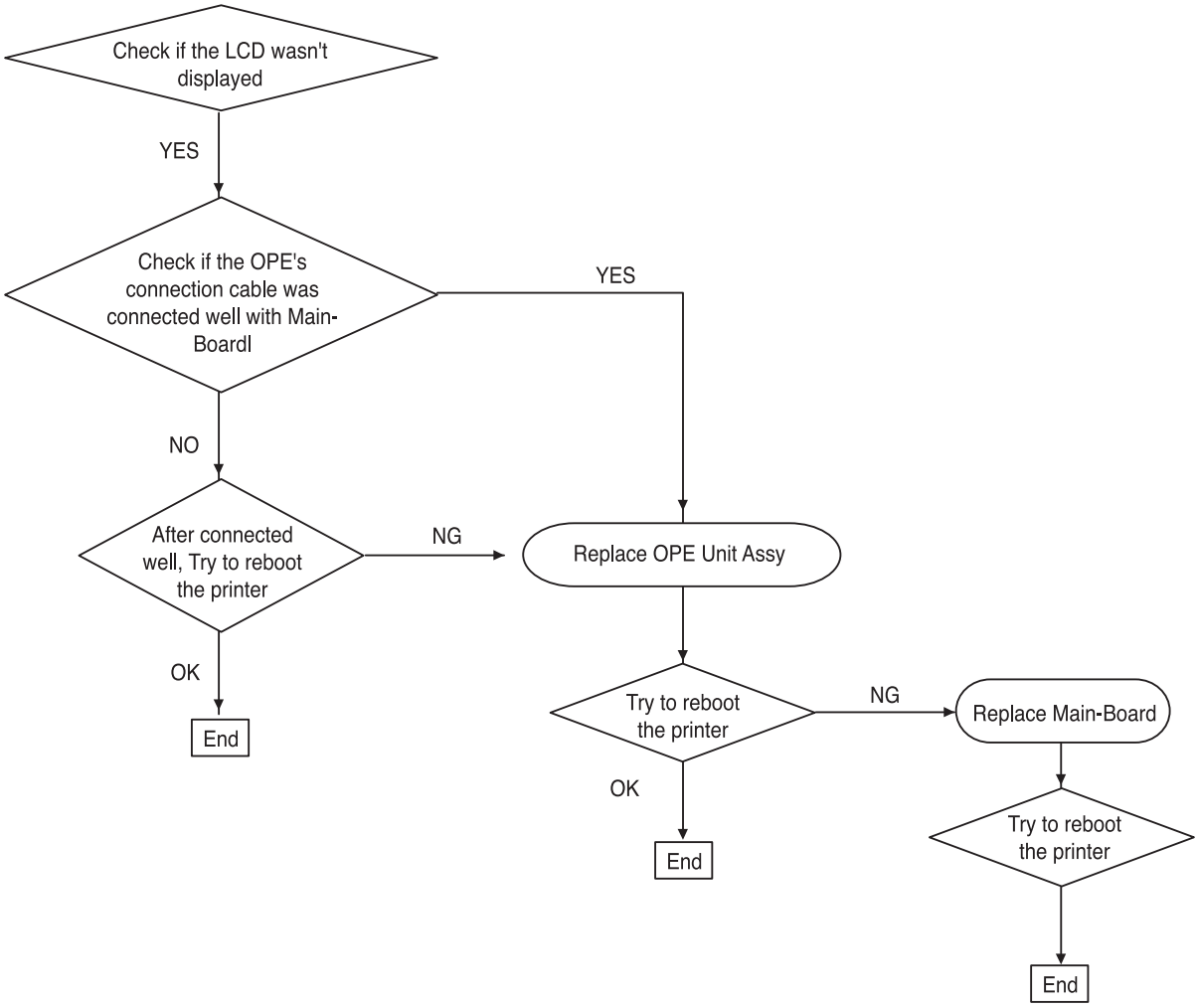
Description	Scanner glass was broken



4.2.5 OPE Problems

1) Nothing Displayed on LCD

Description	LCD does not display anything



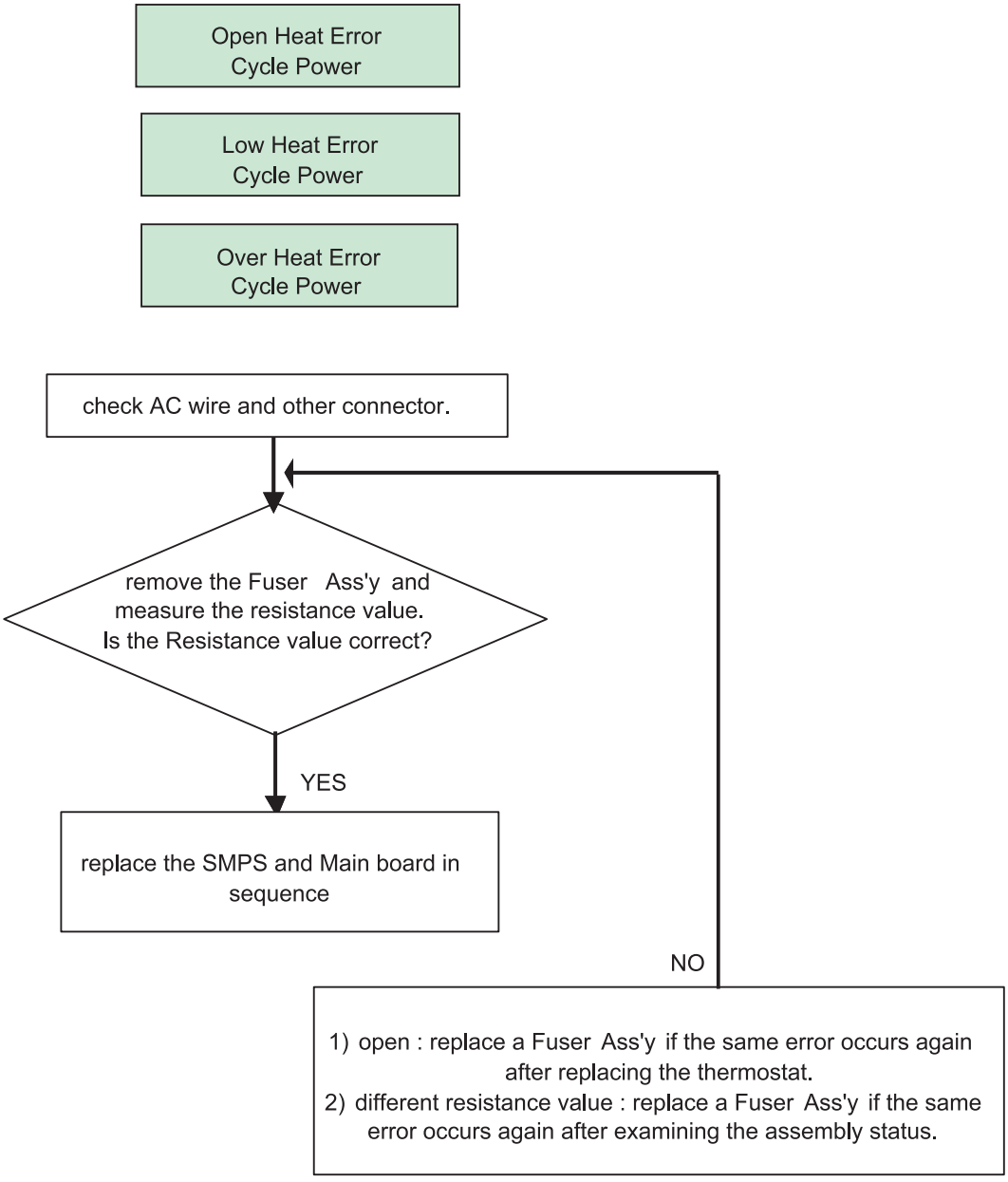
4.2.6 Other Problems

1) Fusing Problems

Error	Phenomenon
Low Heat Error	In warm-up - When the Fuser is under 70 for 45 seconds and more In ready - When the Fuser is under 120 for 15 seconds and more In Printing state - When the Fuser is under 20 of target temperature for 10 seconds and more
Over Heat Error	When the set is over 210 for 4 seconds and more

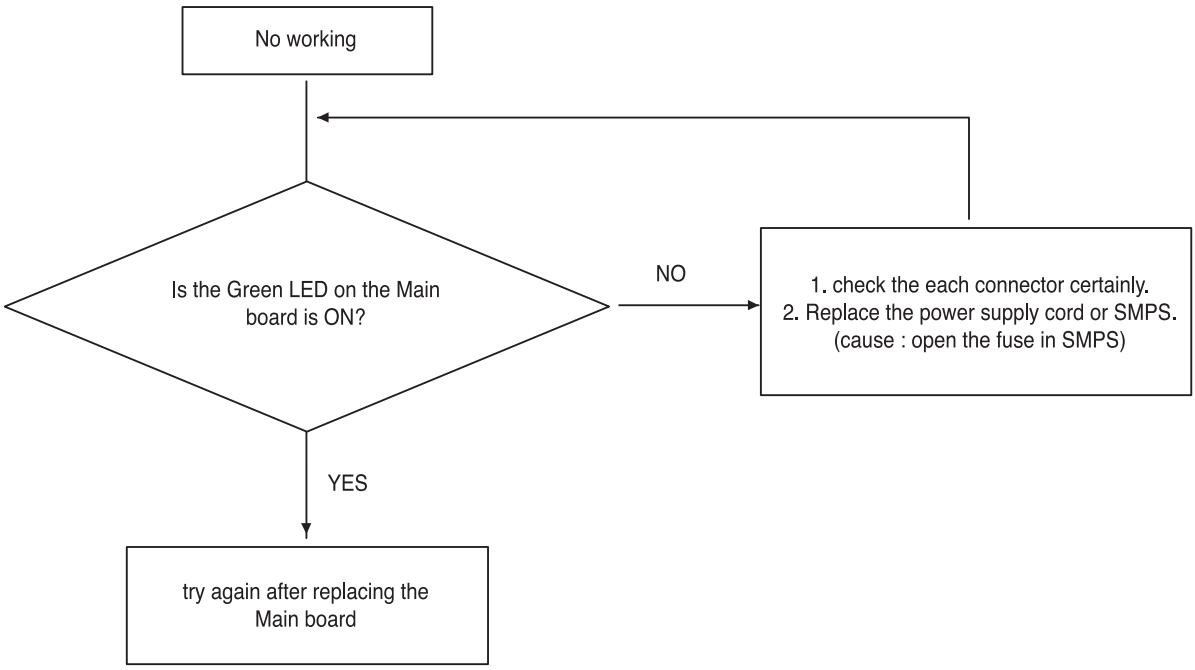
Fuser error

Description	A message below is displayed in a LCD panel.


Open Heat Error
Cycle Power
Low Heat Error
Cycle Power
Over Heat Error
Cycle Power
check AC wire and other connector.
remove the Fuser Ass'y and measure the resistance value. Is the Resistance value correct?
YES
replace the SMPS and Main board in sequence
NO
1) open : replace a Fuser Ass'y if the same error occurs again after replacing the thermostat.
2) different resistance value : replace a Fuser Ass'y if the same error occurs again after examining the assembly status.

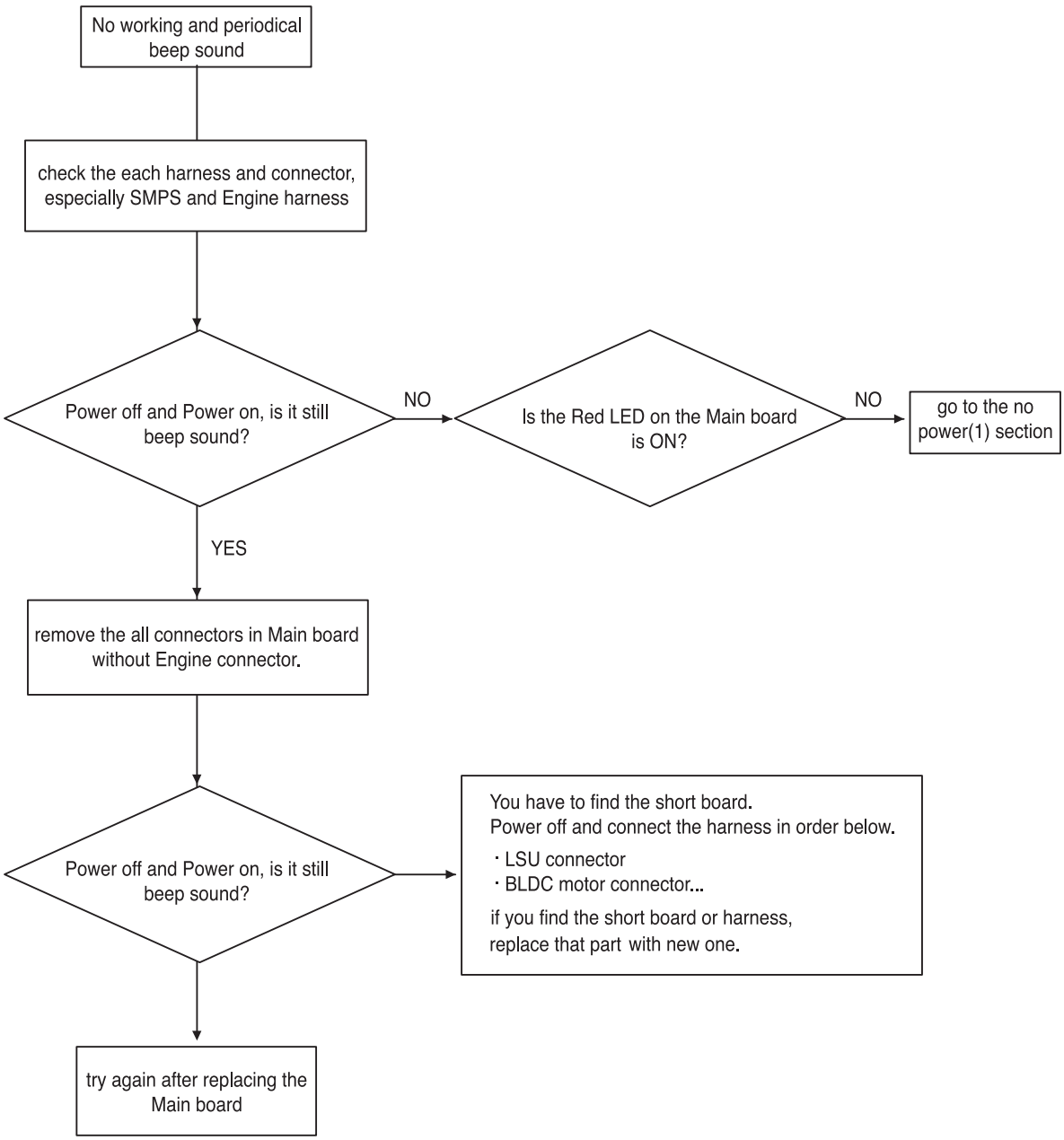
2) No Power(1)

Description	When system power is turned on, all LED on the operator panel do not come on.


No working
Is the Green LED on the Main board is ON?
NO
1. check the each connector certainly.
2. Replace the power supply cord or SMPS.
(cause : open the fuse in SMPS)
YES
try again after replacing the Main board

No Power(2)

Description When system power is turned on, you can hear short beep sound continuously.


No working and periodical beep sound
check the each harness and connector, especially SMPS and Engine harness
Power off and Power on, is it still beep sound?
NO
Is the Red LED on the Main board is ON?
NO
go to the no power(1) section
YES
remove the all connectors in Main board without Engine connector.
Power off and Power on, is it still beep sound?
You have to find the short board.
Power off and connect the harness in order below.
· LSU connector
· BLDC motor connector...
if you find the short board or harness,
replace that part with new one.
try again after replacing the Main board

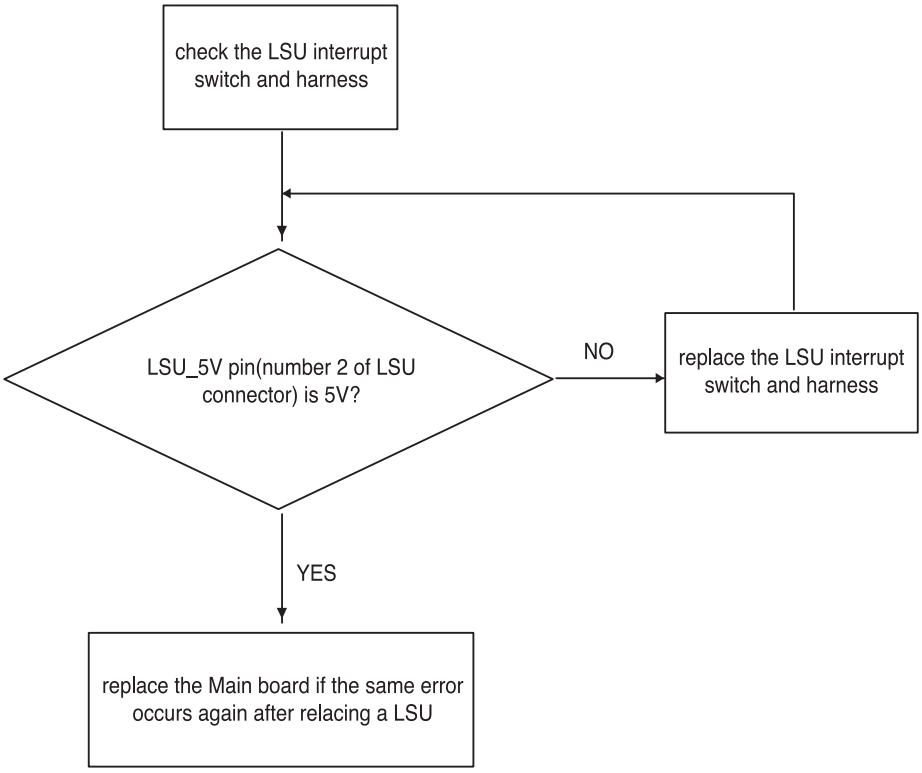
3) LSU Error

Description	A message below is displayed in a LCD panel.

LSU Motor Error
Cycle Power

LSU Hsync Error
Cycle Power

Self Diagnostics
LSU


check the LSU interrupt switch and harness
LSU_5V pin(number 2 of LSU connector) is 5V?
NO
replace the LSU interrupt switch and harness
YES
replace the Main board if the same error occurs again after relacing a LSU

5. Exploded View and Parts list

Contents

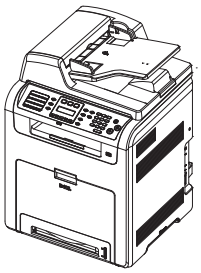
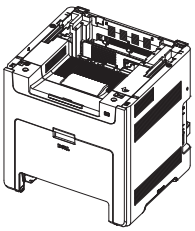
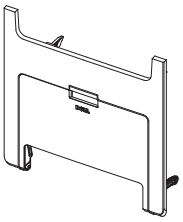
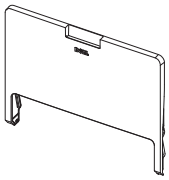
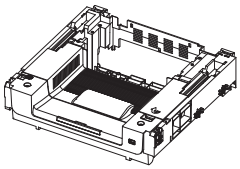
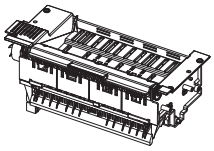
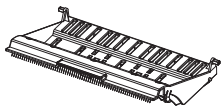
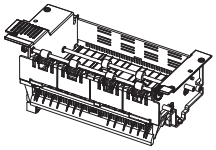
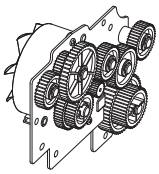
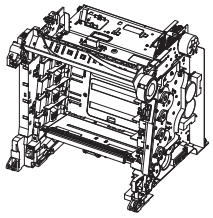
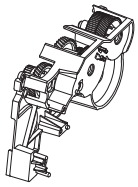
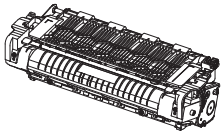
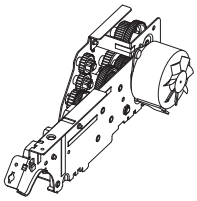
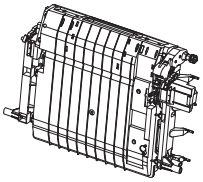
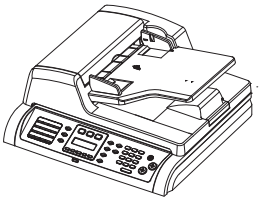
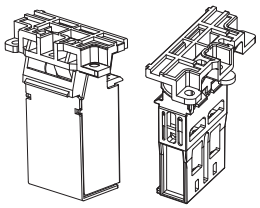
Thumbnail 5-2
5.1 Main 5-4
5.2 Cover Unit 5-7
5.3 Front Cover 5-9
5.4 MP Tray 5-11
5.5 Middle Cover 5-13
5.6 Reverse Unit 5-15
5.7 Top Cover 5-17
5.8 Reverse Frame 5-19
5.9 Reverse Drive 5-21
5.10 Frame 5-23
5.11 Feed Drive 5-25
5.12 Fuser Unit 5-27
5.13 Fuser Drive 5-30
5.14 PTB 5-32
5.15 Scan Ass'y 5-35
5.16 Hinge Unit 5-37
5.17 OPE 5-39
5.18 Platen Ass'y 5-41
5.19 DADF Ass'y 5-44
5.20 Platen Cover DADF 5-46
5.21 DADF lower 5-48
5.22 DADF Motor 5-50
5.23 Cassette 5-52
5.24 SCF Unit 5-55
5.25 SCF Cassette 5-58

DIGITAL LASER MFP

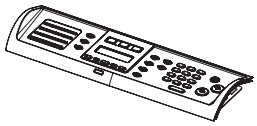
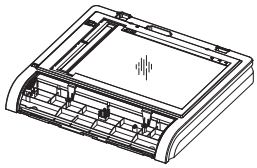
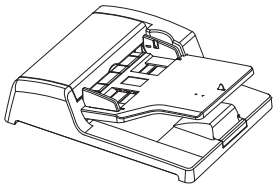
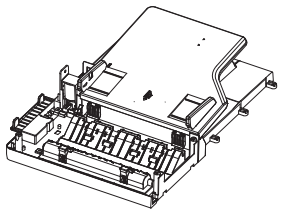
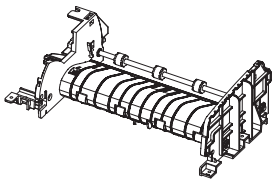
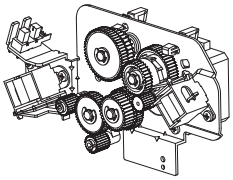
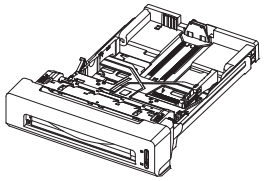
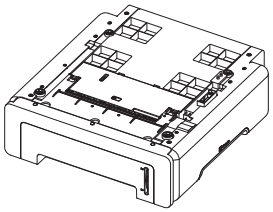
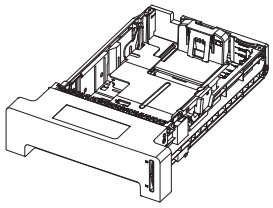
The keynote of Product

- Model : Dell 2145cn
- Scan, Copy, Print, Fax 4 in 1 MFP
- Speed : 20/20 PPM (A4)
- Resolution : 2400x600 dpi (effective output)
- CPU : 360 Mhz
- Memory : 128 MB
- Toner Cartridge Life (Color/Black) : 5K / 5.5K

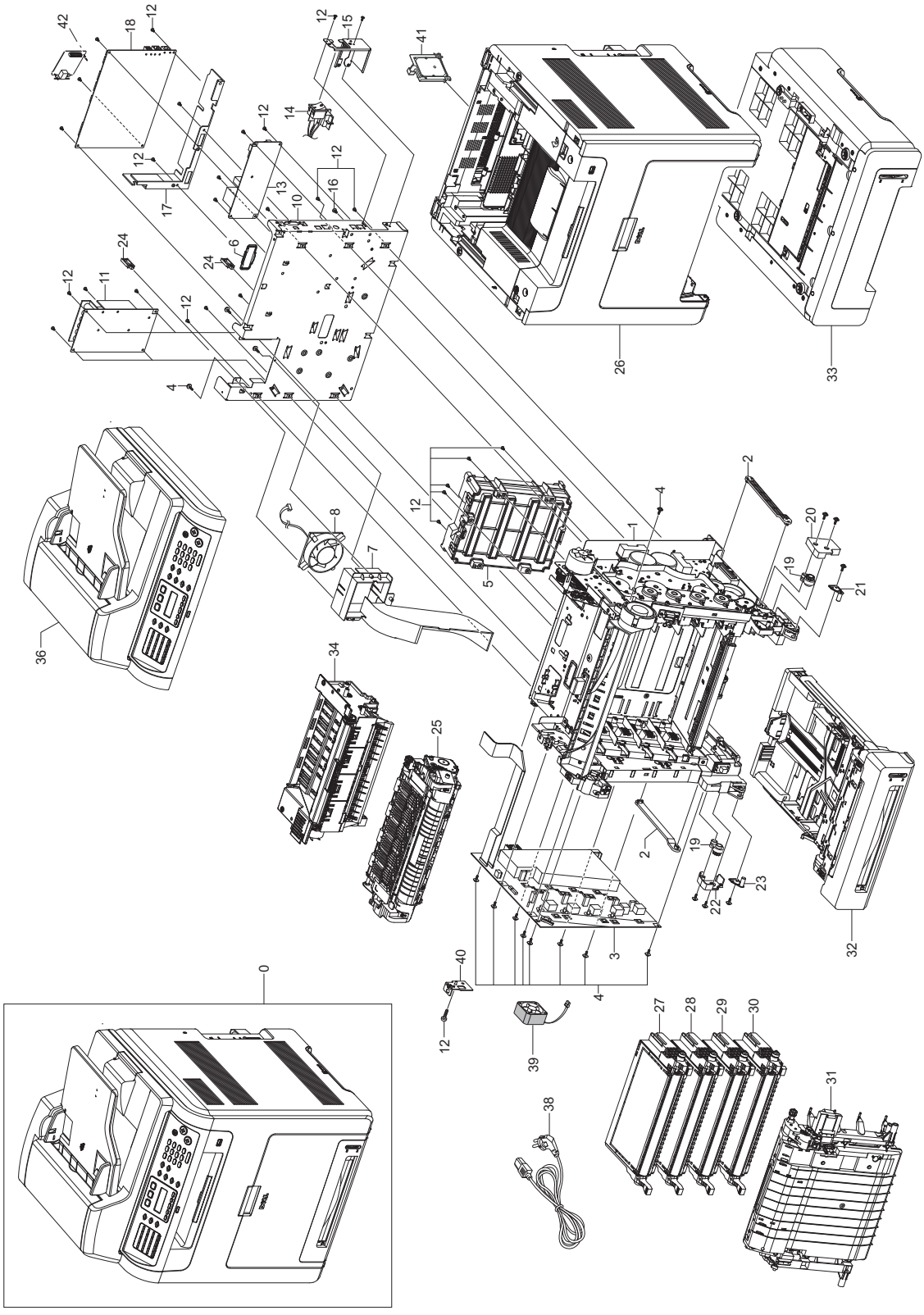
Thumbnail 1

			
5.1 Main	5.2 Cover Unit	5.3 Front Cover	5.4 MP Tray
			
5.5 Middle Cover	5.6 Reverse Unit	5.7 Top Cover	5.8 Reverse Frame
			
5.9 Reverse Drive	5.10 Frame	5.11 Feed Drive	5.12 Fuser Unit
			
5.13 Fuser Drive	5.14 PTB	5.15 Scan Ass'y	5.16 Hinge Unit

Thumbnail 2

			
5.17 OPE	5.18 Platen Ass'y	5.19 DADF Ass'y	5.20 Platen Cover DADF
			
5.21 DADF Lower	5.22 DADF Motor	5.23 Cassette	5.24 SCF Unit
			
5.25 SCF Cassette			

5.1 Main


0
1
2
3
4
5
6
7
8
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
36
38
39
40
41
42

Main Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

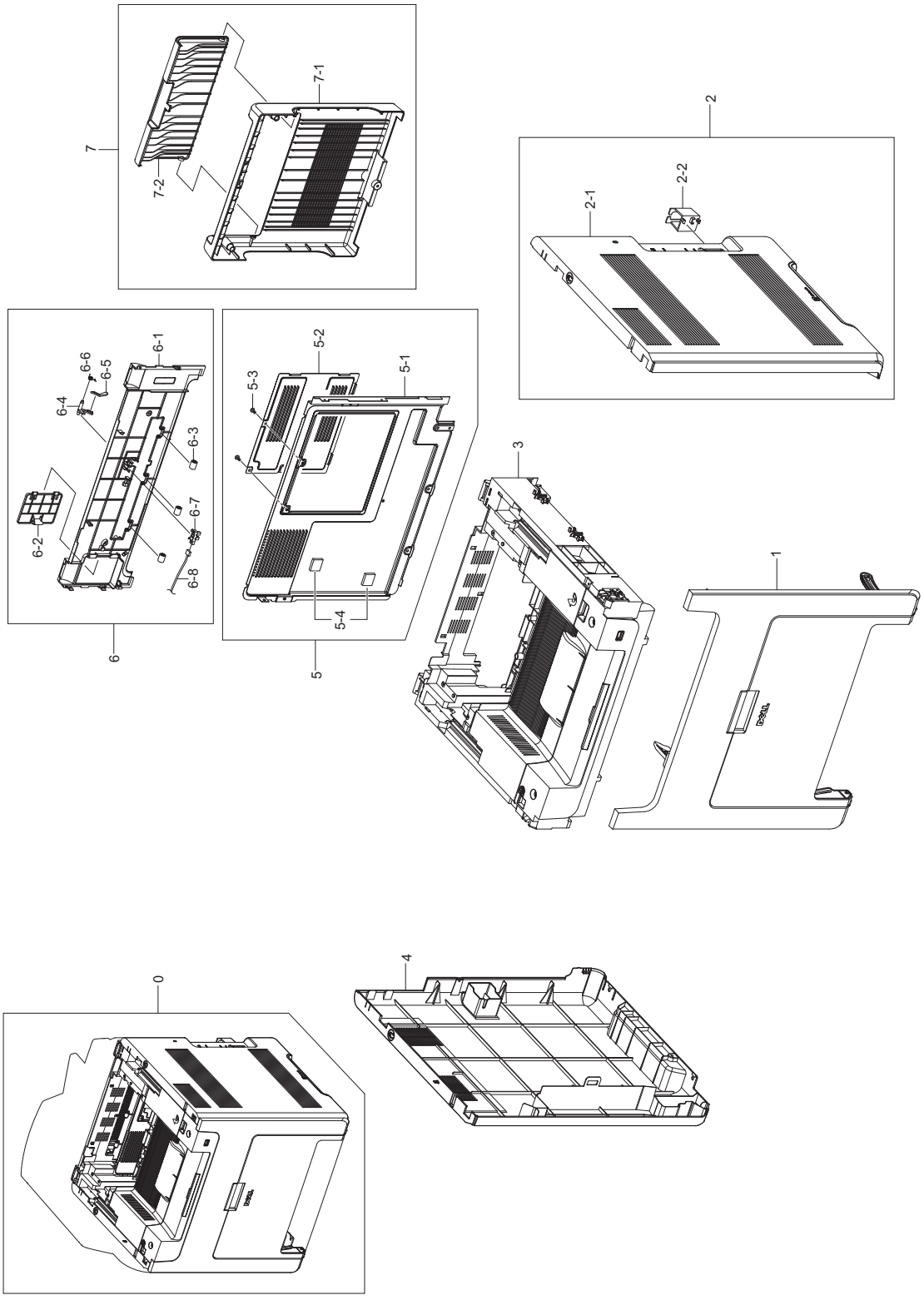
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.1-0	Dell 2145cn	4in1 MFP, 20ppm, DADF			
5.1-1	JC96-04490B	ELA UNIT--MAIN-FRAME	1	SNA	
5.1-2	JC66-01422A	LINK-HINGE	2	SNA	
5.1-3	JC44-00136A	HVPS	1	SA	
5.1-4	6003-000196	SCREW-TAPTITE	32	SNA	
5.1-5	JC96-04500A	ELA UNIT-LSU	1	SA	
5.1-6	JC61-01012A	GUIDE-_M_BUSH HARNESS S	1	SNA	
5.1-7	JC61-01910A	FRAME-DUCT	1	SNA	
5.1-8	JC31-00088A	FAN--DC	1	SA	
5.1-10	JC61-01866B	BRACKET-MAIN	1	SNA	
5.1-11	JC44-00093B	SMPS-PSP_TYPE5_V1	1	SA	110V
5.1-11	JC44-00100B	SMPS-PSP_TYPE5_V2C	1	SA	220V
5.1-12	6003-000269	SCREW-TAPTITE	41	SNA	
5.1-13	JC44-00152A	FDB-SINGLE TRIAC V1	1	SA	110V
5.1-13	JC44-00153A	FDB-SINGLE TRIAC V2C	1	SA	220V
5.1-14	JC39-00943A	HARNESS-AC INLET	1	SA	
5.1-15	JC61-01867A	BRACKET-DUMMY_POWER	1	SNA	
5.1-16	6003-000301	SCREW-TAPTITE	1	SNA	
5.1-17	JC61-01854A	GUIDE-HARNESS	1	SNA	
5.1-18	JC98-01015A	BOARD-CONTROLLER_DIMM	1	SA	
-	JC92-01923A	PBA-RAM DIMM	1	SA	
-	JC92-02130A	PBA-CONTROLLER	1	SA	
5.1-19	JC66-01425A	DAMPER-HINGE	2	SNA	
5.1-20	JC61-01912A	FRAME-DAMPER_L	1	SNA	
5.1-21	JC61-01897A	BRACKET-HINGE_R	1	SNA	
5.1-22	JC61-01911A	FRAME-DAMPER_R	1	SNA	
5.1-23	JC61-01896A	BRACKET-HINGE_L	1	SNA	
5.1-24	6502-001093	CABLE CLAMP	1	SNA	
5.1-25	JC91-00934A	FUSER	1	SA	110V
5.1-25	JC91-00933A	FUSER	1	SA	220V
5.1-26	JC96-05533A	ELA UNIT-COVER	1	SNA	
5.1-27	JC96-04391E	ELA UNIT-DEV K_SET	1	SNA	
5.1-28	JC96-04392E	ELA UNIT-DEV C_SET	1	SNA	
5.1-29	JC96-04393E	ELA UNIT-DEV M_SET	1	SNA	
5.1-30	JC96-04394E	ELA UNIT-DEV Y_SET	1	SNA	
5.1-31	JC96-04406A	ELA UNIT-PTB SET_DUPLEX	1	SA	
5.1-32	JC96-05545A	ELA HOU-UNIT_CASSETTE	1	SA	
5.1-33	JC96-05547A	ELA HOU-UNIT_SCF	1	SNA	Option Unit
5.1-34	JC90-00912A	REVERSE	1	SA	

Main Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.1-35	JC96-05541A	ELA HOU-SCAN	1	SA	110V
5.1-36	JC97-03576A	SCANNER-ICON	1	SA	220V
5.1-38	3903-000085	CBF-POWER CORD	1	SA	110V
5.1-38	3903-000067	CBF-POWER CORD	1	SA	220V
5.1-39	JC31-00050A	FAN	1	SA	
5.1-40	JC61-02656A	BRACKET-OPE SIDE	1	SNA	
5.1-41	CLX-HDK410	HARD DISK_KIT	1	SNA	
5.1-42	JC92-02060C	PBA-FAX_CARD P	1	SA	

5.2 Cover Unit

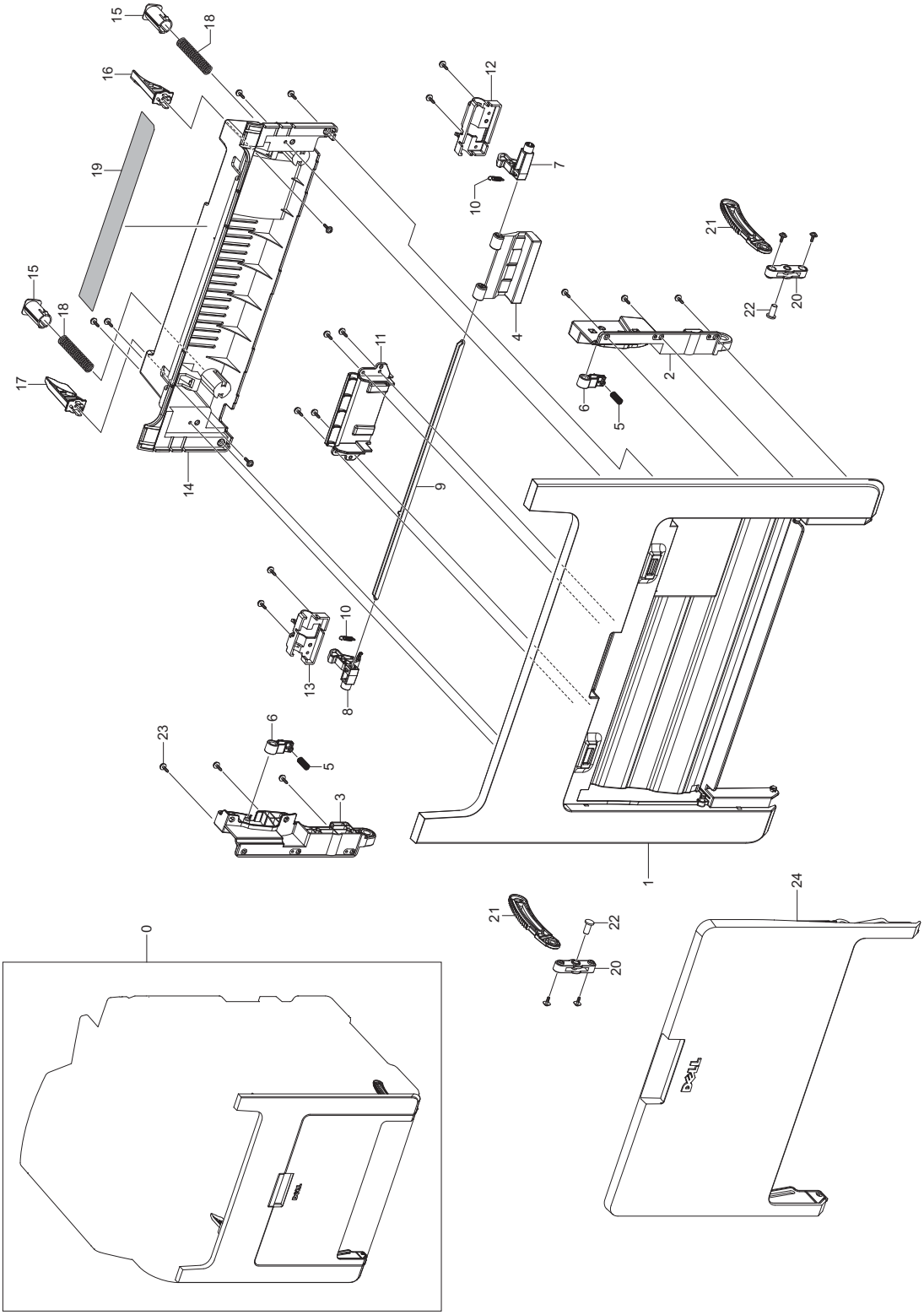


Cover Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.2-0	JC96-05533A	ELA UNIT-COVER	1	SNA	
5.2-1	JC97-03557A	MEA-COVER_FRONT	1	SA	
5.2-2	JC97-03558A	MEA-COVER RIGHT	1	SA	
5.2-2-1	JC63-01520D	COVER-RIGHT	1	SNA	
5.2-2-2	JC63-01563B	COVER-WIRE	1	SNA	
5.2-3	JC96-05524A	ELA UNIT-COVER MIDDLE	1	SA	
5.2-4	JC63-01519A	COVER-LEFT	1	SA	
5.2-5	JC97-03052A	MEA-BRACKET REAR	1	SA	
5.2-5-1	JC61-02211A	BRACKET-REAR	1	SNA	
5.2-5-2	JC63-01314A	COVER-REAR HDD	1	SNA	
5.2-5-3	6003-000269	SCREW-TAPTITE	2	SNA	
5.2-6	JC96-05525A	ELA UNIT-MIDDLE REAR	1	SNA	
5.2-6-1	JC63-01549C	COVER-MIDDLE REAR	1	SNA	
5.2-6-2	JC63-01667A	COVER-WLAN	1	SNA	
5.2-6-3	JC72-40981C	PMO-ROLLER UPPER DP	3	SNA	
5.2-6-4	JC66-01924A	ACTUATOR-REAR OUT	1	SNA	
5.2-6-5	JC61-02547A	GUIDE-ACTUATOR	1	SNA	
5.2-6-6	JC61-00076A	SPRING-ETC TORSION DOC	1	SA	
5.2-6-7	0604-001095	PHOTO-INTERRUPTER	1	SNA	
5.2-6-8	JC39-00942A	HARNESS-REVERSE JAM	1	SA	
5.2-7	JC97-03562A	MEA-COVER REVERSE	1	SA	
5.2-7-1	JC63-01554B	COVER-REV EXIT	1	SNA	
5.2-7-2	JC63-01553B	COVER-REVERSE EXIT	1	SNA	

5.3 Front Cover

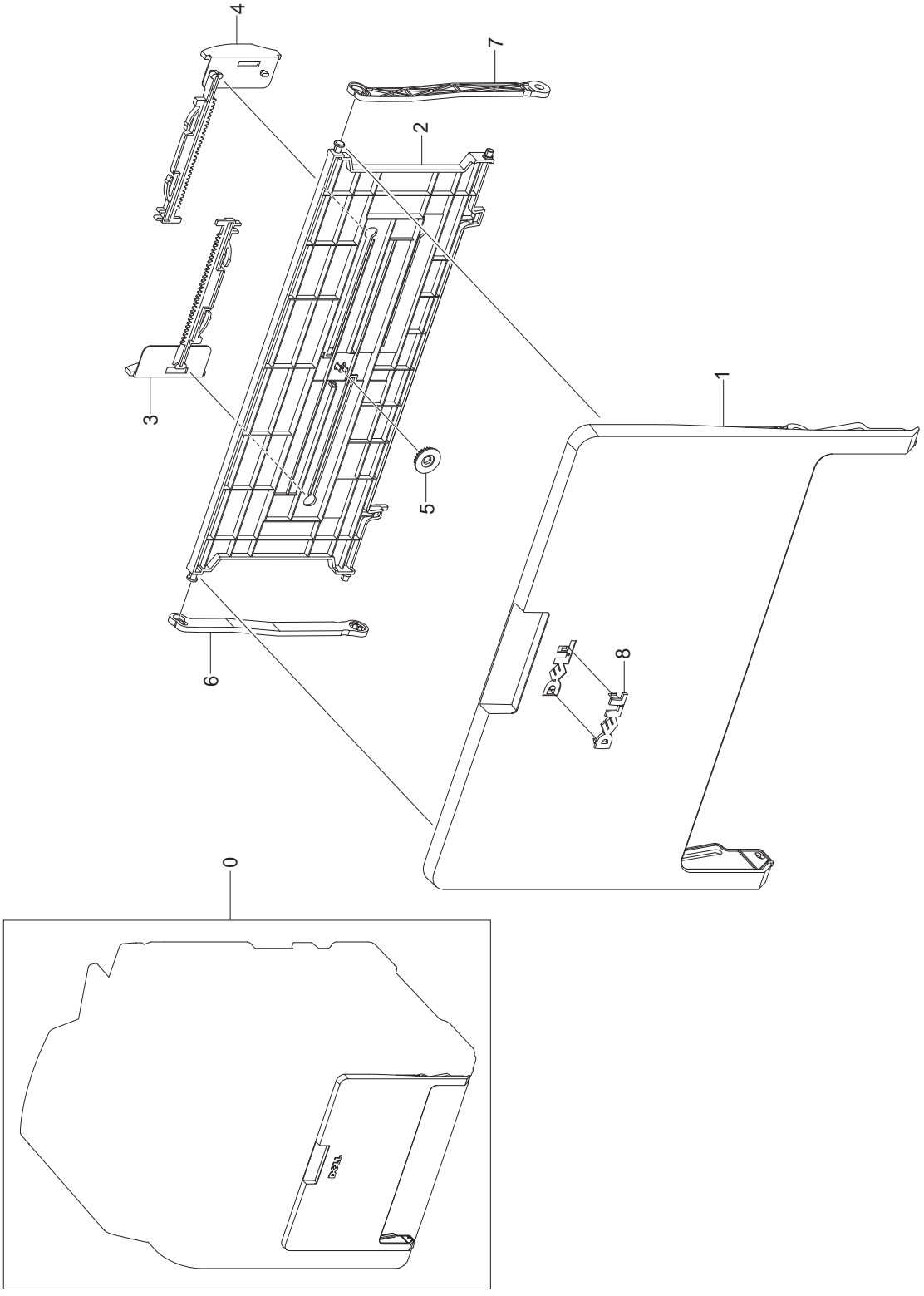


Front Cover Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.3-0	JC97-03557A	MEA-COVER_FRONT	1	SA	
5.3-1	JC63-01521B	COVER-FRONT	1	SA	
5.3-2	JC61-01849A	SUPPORT-PTB R	1	SA	
5.3-3	JC61-01848A	SUPPORT-PTB L	1	SA	
5.3-4	JC64-00299C	KNOB-HANDLE	1	SNA	
5.3-5	JC61-00038A	SPRING ETC-GUIDE DEVE	2	SA	
5.3-6	JC66-01354A	LEVER-PTB	2	SNA	
5.3-7	JC64-00306A	LOCKER-FRONT R	1	SNA	
5.3-8	JC64-00305A	LOCKER-FRONT L	1	SNA	
5.3-9	JC61-01050A	BRACKET-P-COVER LOCK	1	SNA	
5.3-10	6107-001138	SPRING-ES	2	SA	110V
5.3-11	JC61-01841A	HOLDER-KNOB HANDLE	1	SNA	220V
5.3-12	JC61-01843A	HOLDER-LOCKER FRONT R	1	SNA	
5.3-13	JC61-01842A	HOLDER-LOCKER FRONT L	1	SNA	110V
5.3-14	JC63-01290A	COVER-FRONT PATH	1	SNA	220V
5.3-15	JC66-01421A	LEVER-PTB TOP	2	SNA	
5.3-16	JC66-01353A	LEVER-COUPLING R	1	SNA	
5.3-17	JC66-01352A	LEVER-COUPLING L	1	SNA	
5.3-18	6107-001345	SPRING-CS	2	SA	
5.3-19	JC68-01905A	LABEL-INSTALL	1	SNA	
5.3-20	JC61-01846A	HOLDER-LINK FRONT	2	SNA	
5.3-21	JC66-01358A	LINK-SUPPORT	2	SNA	
5.3-22	JC66-00835A	SHAFT-HINGE LINK	2	SNA	
5.3-23	6003-000196	SCREW-TAPTITE	24	SNA	
5.3-24	JC97-03556A	MEA-TRAY MP	1	SA	

5.4 MP Tray

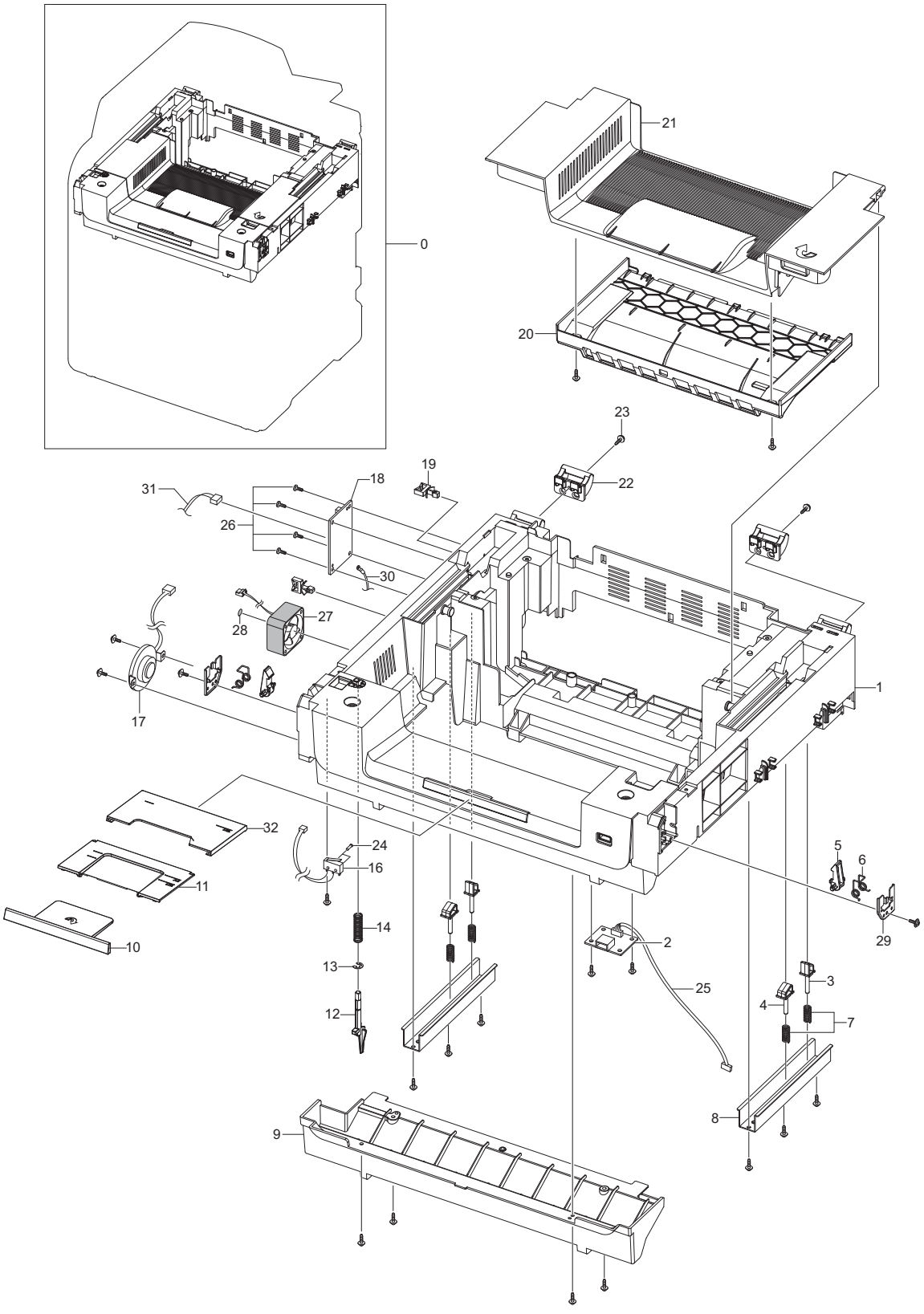


MP Tray Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.4-0	JC97-03556A	MEA-MP TRAY	1	SA	
5.4-1	JC63-02178A	COVER-MP_TRAY	1	SNA	
5.4-2	JC63-01293C	TRAY-ASF_INPUT	1	SNA	
5.4-3	JC61-01043C	GUIDE-_M_SIDE MP L	1	SNA	
5.4-4	JC61-01042C	GUIDE-_M_SIDE MP R	1	SA	
5.4-5	JG66-40003A	GEAR-PINION	1	SNA	
5.4-6	JC66-01349B	LINK-TRAY_MP_L	1	SNA	
5.4-7	JC66-01350B	LINK-TRAY_MP_R	1	SNA	
5.4-8	JC64-00440A	BADGE-DELL	1	SNA	

5.5 Middle Cover

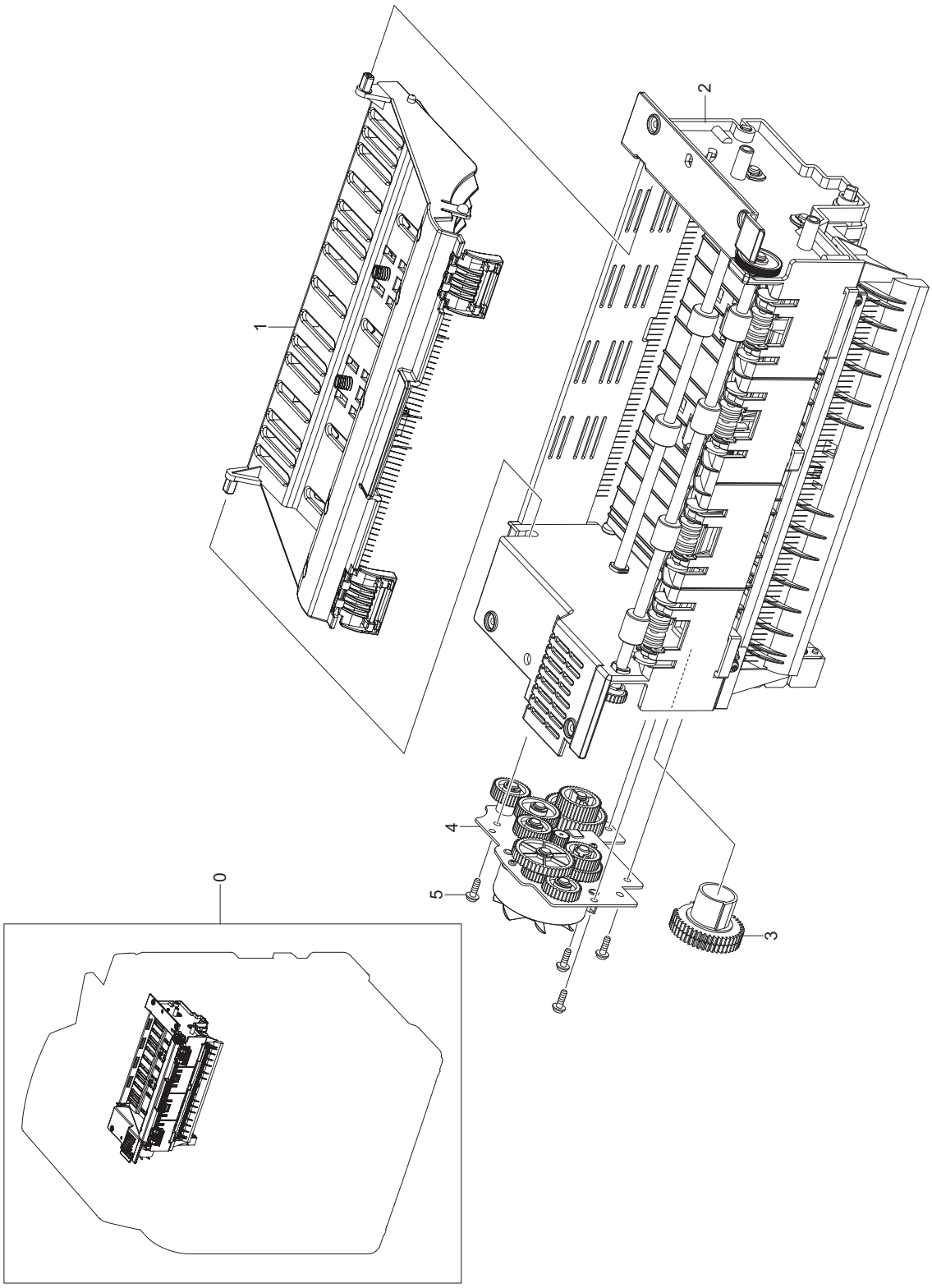


Middle Cover Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.5-0	JC96-05524A	ELA UNIT-COVER MIDDLE	1	SA	
5.5-1	JC63-01543B	COVER-MIDDLE	1	SNA	
5.5-2	JC92-01964A	PBA-USB HOST	1	SA	
5.5-3	JC66-01616A	LATCH-MIDDLE A	2	SA	
5.5-4	JC66-01617A	LATCH-MIDDLE B	2	SA	
5.5-5	JC61-01983B	HOLDER-LSU	2	SNA	
5.5-6	JC61-02512A	SPRING ETC-LOCKER	2	SA	
5.5-7	6107-001194	SPRING-CS	4	SNA	
5.5-8	JC61-02210A	BRACKET-MID LOCK	2	SNA	
5.5-9	JC63-01567B	COVER-LOCKER FRONT	1	SA	
5.5-10	JC63-01562B	TRAY-ASF FOLDER	1	SA	110V
5.5-11	JC63-01560C	TRAY-ASF OUTPUT	1	SA	220V
5.5-12	JC66-01623A	ACTUATOR-SW_OPEN	1	SA	
5.5-13	6044-000231	RING-E	1	SA	110V
5.5-14	6107-001363	SPRING-CS	1	SA	220V
5.5-16	JC39-00847A	HARNESS-SCANNER OPEN	1	SA	
5.5-17	3001-002207	SPEAKER	1	SA	
5.5-18	JC92-01953A	PBA-REVERSE	1	SA	
5.5-19	6502-000132	CABLE CLAMP	2	SNA	
5.5-20	JC63-01550A	COVER-MIDDLE EXIT	1	SA	
5.5-21	JC63-01547B	COVER-MIDDLE OPEN	1	SA	
5.5-22	JC61-02410A	SUPPORT-MIDDLE	2	SNA	
5.5-23	6003-000196	SCREW-TAPTITE	18	SNA	
5.5-24	6003-000152	SCREW-TAPTITE	1	SA	
5.5-25	JC39-00839A	HARNESS-USB HOST	1	SA	
5.5-26	6003-000282	SCREW-TAPTITE	6	SNA	
5.5-27	JC31-00050A	FAN	1	SA	
5.5-28	JC68-01760A	LABEL-INFORMATION	1	SNA	
5.5-29	JC61-02213A	BRACKET-LOCKER	1	SNA	
5.5-30	JC39-00496A	CBF-HARNESS LSU GND	1	SA	
5.5-31	JC39-00893A	HARNESS-FAN EXTENSION	1	SA	
5.5-32	JC63-02049B	TRAY-ASF LEGAL	1	SA	

5.6 Reverse Unit

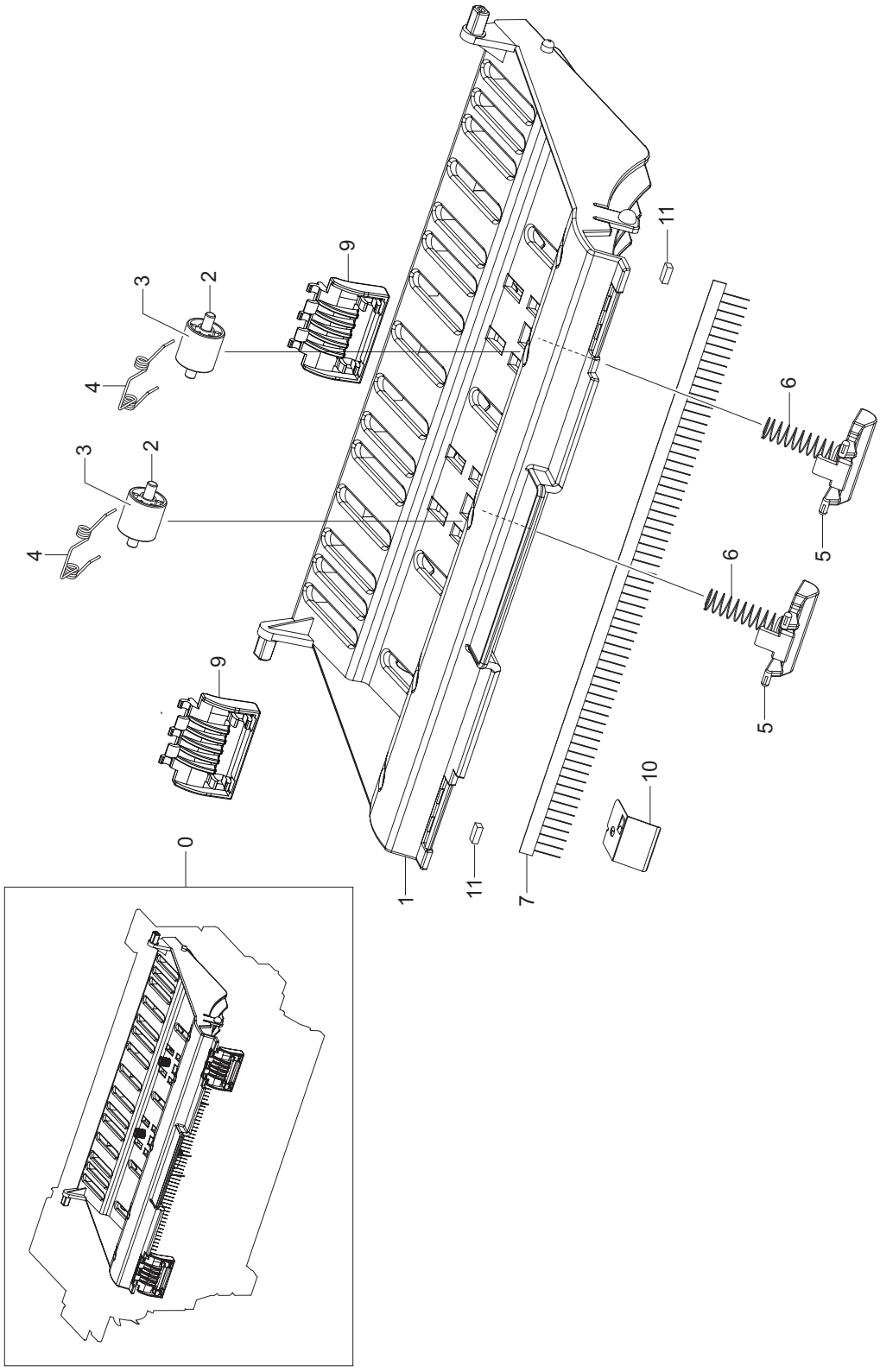


Reverse Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.6-0	JC90-00912A	REVERSE	1	SA	
5.6-1	JC97-03565A	MEA UNIT-COVER TOP	1	SNA	
5.6-2	JC96-04822A	ELA UNIT-FRAME REV	1	SA	
5.6-3	JC97-03146A	MEA-GEAR REVERSE	1	SA	
5.6-4	JC96-04814A	ELA UNIT-MOTOR BRKT	1	SA	
5.6-5	6003-000196	SCREW-TAPTITE	4	SNA	

5.7 Top Cover

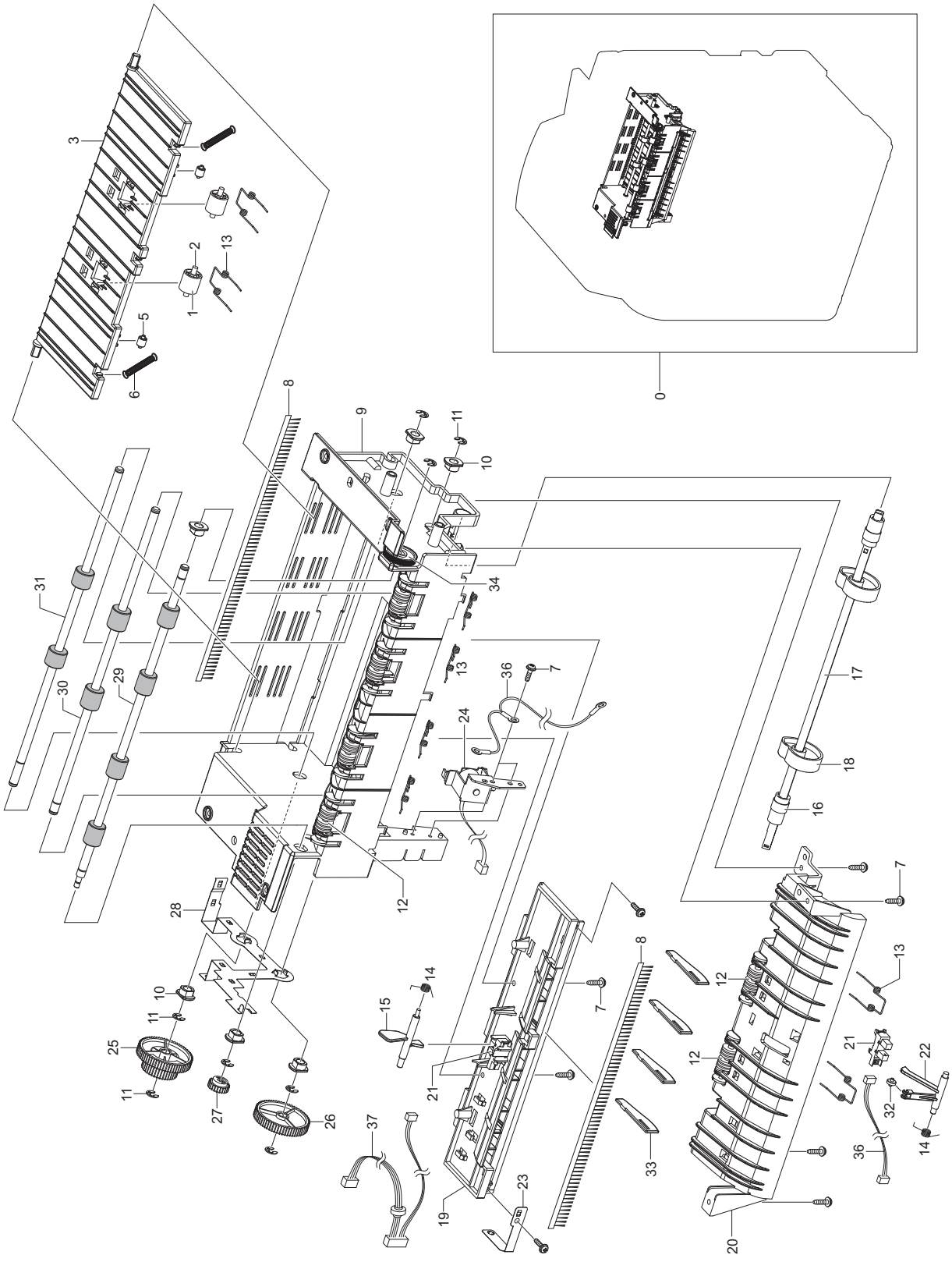


Top Cover Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.7-0	JC97-03565A	MEA UNIT-COVER TOP	1	SNA	
5.7-1	JC63-01542A	COVER-REVERSE TOP	1	SNA	
5.7-2	JC66-01833A	SHAFT-REV IDLE	2	SNA	
5.7-3	JC66-00529A	ROLLER-M-IDLE FEED	2	SNA	
5.7-4	JC61-02449A	SPRING ETC-REVERSE	2	SA	
5.7-5	JC61-02218A	GUIDE-PAPER REV	2	SNA	
5.7-6	6107-001394	SPRING CS	2	SA	
5.7-7	JC75-00095A	MEC-BRUSH ANTISTATIC	1	SNA	
5.7-9	JC61-00712D	GUIDE-STACKER SUB	2	SNA	
5.7-10	JC63-01557A	GROUND REV FRONT	1	SNA	
5.7-11	JC72-01472A	SPONGE-PAD	2	SA	
-	JC98-01581A	LABEL(P)-CAUTION HOT	1	SNA	

5.8 Reverse Frame

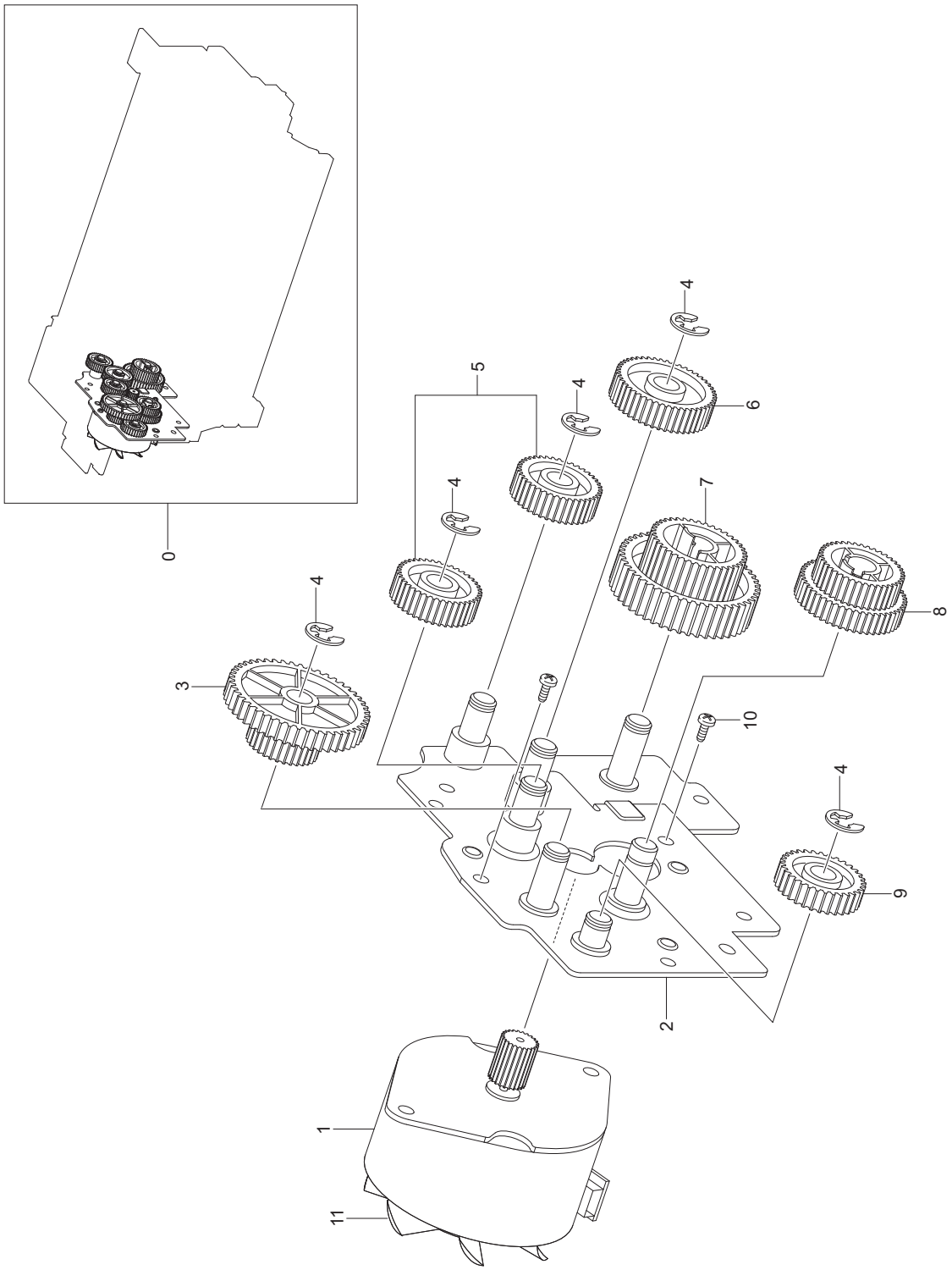


Reverse Frame Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.8-0	JC96-04822A	ELA UNIT-FRAME REV	1	SA	
5.8-1	JC66-00529A	ROLLER-M-IDLE FEED	2	SNA	
5.8-2	JC66-01833A	SHAFT-REV IDLE	2	SNA	
5.8-3	JC61-02217A	PLATE-REVERSE	1	SNA	
5.8-5	JC66-02019A	ROLLER-IDLE CAM	2	SNA	
5.8-6	6107-001185	SPRING-ES	2	SNA	
5.8-7	6003-000196	SCREW-TAPTITE	11	SNA	
5.8-8	JC75-00095A	MEC-BRUSH ANTISTATIC	2	SNA	
5.8-9	JC61-02199A	FRAME-REVERSE	1	SNA	
5.8-10	JC61-00423A	BUSH-6_D	6	SA	
5.8-11	6044-000125	RING-E	5	SNA	
5.8-12	JC72-41007A	PMO-ROLLER FD F	6	SA	
5.8-13	JC61-02449A	SPRING ETC-REVERSE	8	SA	
5.8-14	JB61-00076A	SPRING ETC-TORSION DOC (CC2-F)	2	SNA	
5.8-15	JC66-01621A	ACTUATOR-REV_OUT	1	SNA	
5.8-16	JC61-02212A	HOLDER-SHAFT CAM	2	SNA	
5.8-17	JC66-01618A	SHAFT-CAM REV	1	SNA	
5.8-18	JC66-01620A	CAM-REV	2	SNA	
5.8-19	JC63-01556A	COVER-BOTTOM REV	1	SNA	
5.8-20	JC63-01561A	COVER-MIDDLE INLET	1	SNA	
5.8-21	0604-001095	PHOTO-INTERRUPTER	2	SNA	
5.8-22	JC66-01622A	ACTUATOR-MIDDLE	1	SNA	
5.8-23	JC63-01566A	GROUND-BOTTOM	1	SNA	
5.8-24	JC33-00022A	SOLENOID-PICK_UP	1	SA	
5.8-25	JC66-01615A	GEAR-REV 65/31	1	SNA	
5.8-26	JC66-01631A	GEAR-REV 65	1	SNA	
5.8-27	JC66-00810A	GEAR-EXIT_DRV17	1	SNA	
5.8-28	JC63-01558A	GROUND-REV MAIN	1	SNA	
5.8-29	JC66-01836A	ROLLER-EXIT	1	SNA	
5.8-30	JC66-01835A	ROLLER-MIDDLE	1	SNA	
5.8-31	JC66-01834A	ROLLER-REVERSE	1	SNA	
5.8-32	JC66-01829A	ROLLER-ACT MIDDLE	1	SNA	
5.8-33	JC61-02510A	GUIDE-BOTTOM REV	4	SNA	
5.8-34	JC66-01614A	GEAR-REMOVE	1	SNA	
5.8-36	JC39-00840A	REV GND HARNESS	1	SA	
5.8-37	JC39-00846A	HARNESS-REV-SWING	1	SA	
5.8-38	JC39-00845A	HARNESS-REV MOT EXIT	1	SA	

5.9 Reverse Drive

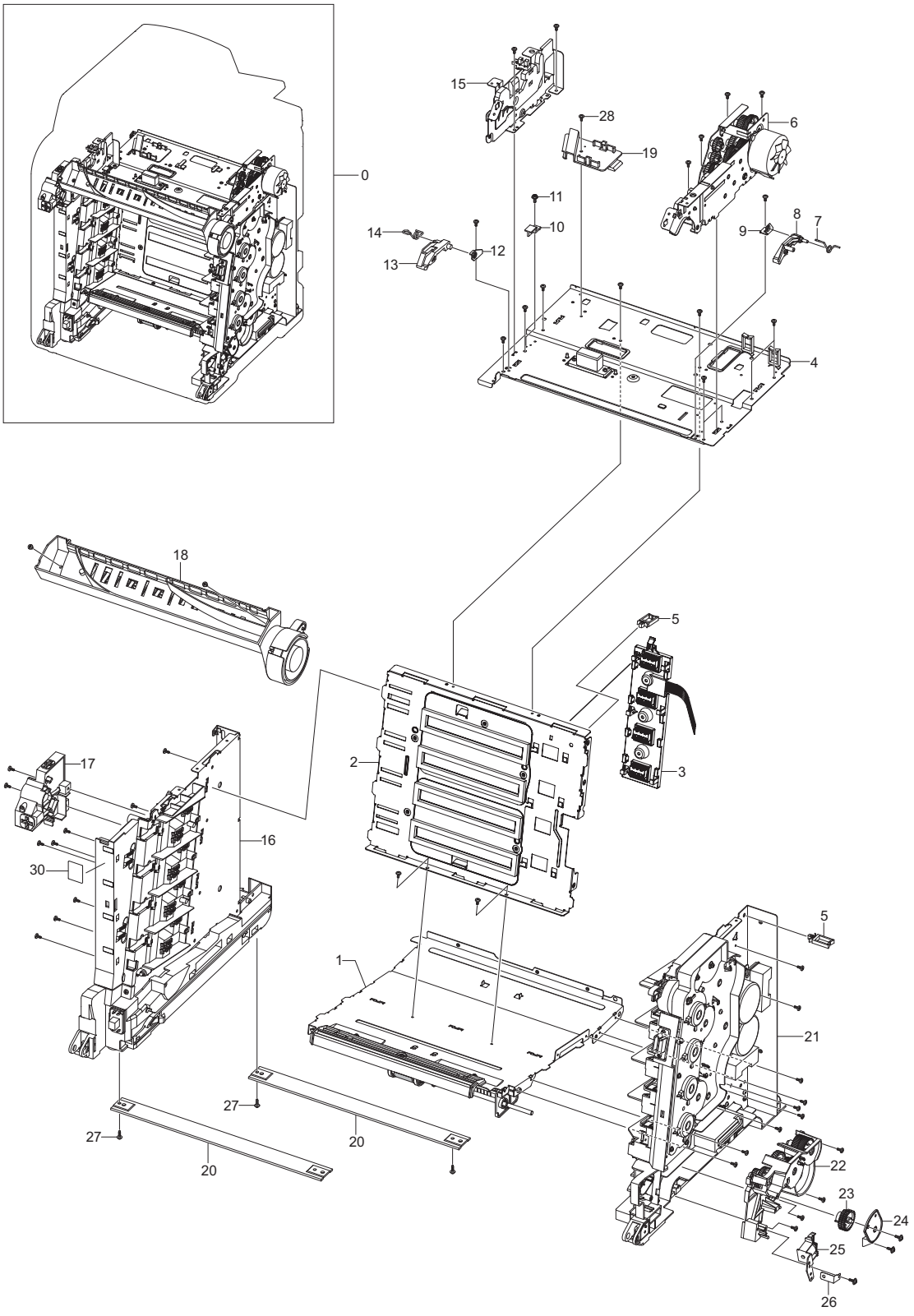


Reverse Drive Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.9-0	JC96-04814A	ELA UNIT-MOTOR BRKT	1	SA	
5.9-1	JC31-00106A	MOTOR STEP	1	SA	
5.9-2	JC61-02208A	BRACKET-GEAR REV	1	SNA	
5.9-3	JC66-01611A	GEAR-REV 39/19	1	SNA	
5.9-4	6044-000125	RING-E	5	SNA	
5.9-5	JC66-01609A	GEAR-REV 31	2	SNA	
5.9-6	JC66-01613A	GEAR-REV 37	1	SNA	
5.9-7	JC66-01630A	GEAR-REV 26/39	1	SNA	
5.9-8	JC66-01612A	GEAR-REV 39/23	1	SNA	
5.9-9	JC66-01610A	GEAR-REV 23	1	SNA	
5.9-10	6003-000269	SCREW-TAPTITE	2	SNA	
5.9-11	JC72-00825A	PMO-IMPELLER-DRV	1	SNA	

5.10 Frame

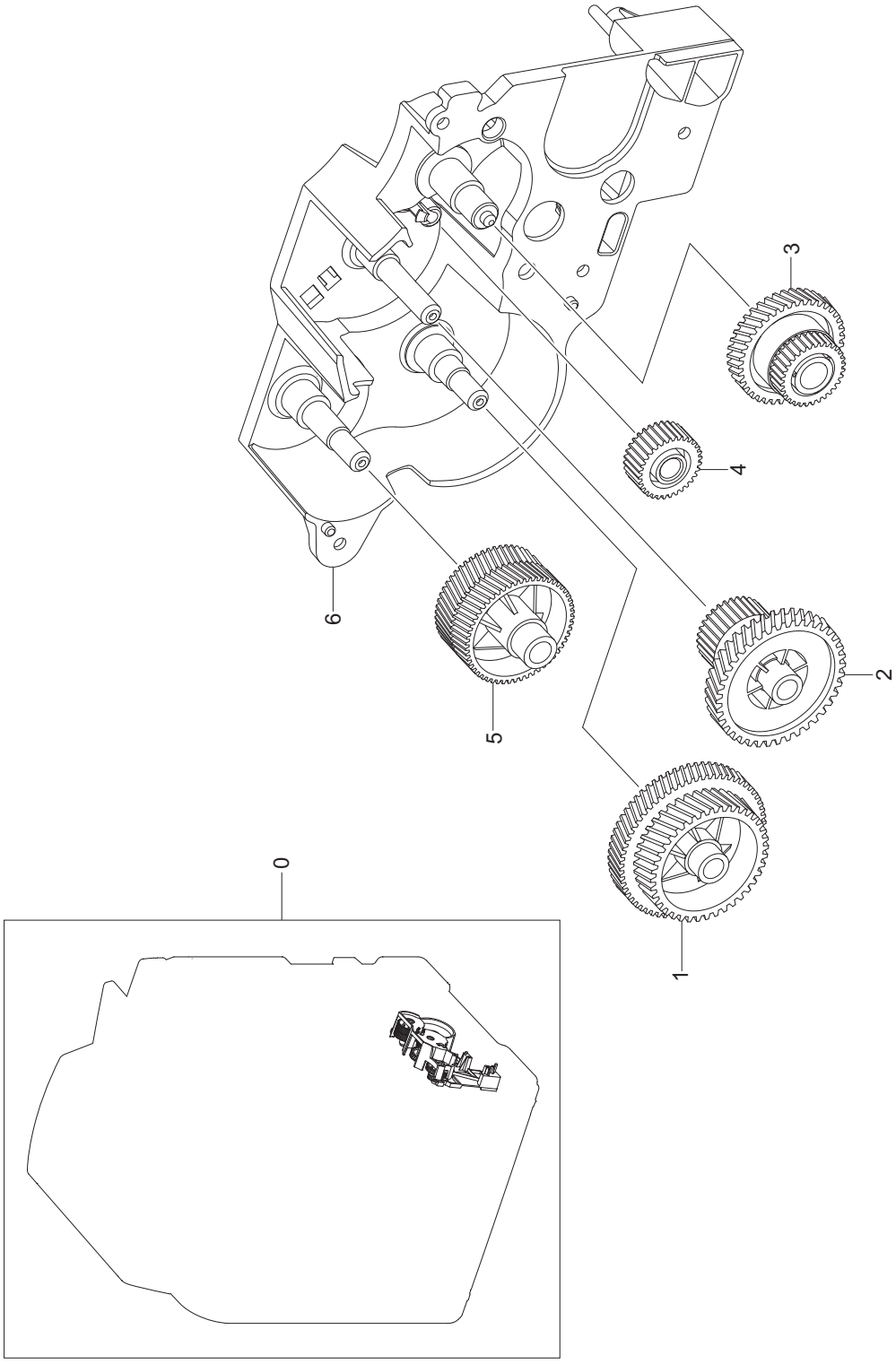

0
15
28
19
6
11
10
14
12
13
9
8
7
4
18
5
2
3
17
16
30
1
5
21
27
20
27
20
22
23
24
25
26

Frame Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.10-0	JC96-04490B	ELA UNIT-MAIN_FRAME	1	SNA	
5.10-1	JC96-04480A	ELA UNIT-FRAME_BOTTOM	1	SNA	
5.10-2	JC61-01927A	FRAME-LSU	1	SNA	
5.10-3	JC96-04488A	ELA UNIT-DEVE_CRUM	1	SA	
5.10-4	JC96-04479B	ELA UNIT-FRAME_TOP	1	SA	
5.10-5	JC61-00423A	BUSH-6_D	1	SA	
5.10-6	JC96-04501A	ELA UNIT-FUSER BLDC	1	SNA	
5.10-7	JC61-01879A	SPRING ETC-LOCK_PTB_R	1	SNA	
5.10-8	JC64-00303A	LOCKER-PTB_R	1	SA	
5.10-9	JC61-01869A	BRACKET-LOCKER_PTB_R	1	SNA	
5.10-10	JC66-01300A	LEVER-FUSER FRAME	1	SNA	110V
5.10-12	JC61-01855A	BRACKET-LOCKER_PTB_L	1	SNA	220V
5.10-13	JC64-00304A	LOCKER-PTB_L	1	SA	
5.10-14	JC61-01899A	SPRING ETC-LOCK_PTB_L	1	SNA	110V
5.10-15	JC96-04481A	ELA UNIT-OPE_LEFT	1	SA	220V
5.10-16	JC96-04482A	ELA UNIT-FRAME_LEFT	1	SNA	
5.10-17	JC97-02883A	MEA UNIT-COVER_OPEN	1	SA	
5.10-18	JC96-04487A	ELA UNIT-DUCT_FUSER	1	SA	
5.10-19	JC61-01890A	GUIDE-HARNESS_CABLE	1	SNA	
5.10-20	JC71-00042A	BAR-P_CROSS BOTTOM	2	SA	
5.10-21	JC96-04485A	ELA UNIT-FRAME_RIGHT	1	SNA	
5.10-22	JC97-02854A	MEA UNIT-FEED DRIVE	1	SA	
5.10-23	JC97-02895A	MEA-GEAR PICK UP	1	SA	
5.10-24	JC67-00215A	CAP-MAIN PICK-UP GEAR	1	SNA	
5.10-25	JC33-00022A	SOLENOID-PICK_UP	1	SA	
5.10-26	JC61-01922A	PLATE-GND-SOLENOID	1	SNA	
5.10-27	6003-000196	SCREW-TAPTITE	7	SNA	
5.10-28	6003-000269	SCREW-TAPTITE	49	SNA	
5.10-29	JC72-01379A	SPONEGE-SEALING_LSU	4	SNA	
5.10-30	JC68-02050A	LABEL-CAUTION	1	SNA	

5.11 Feed Drive

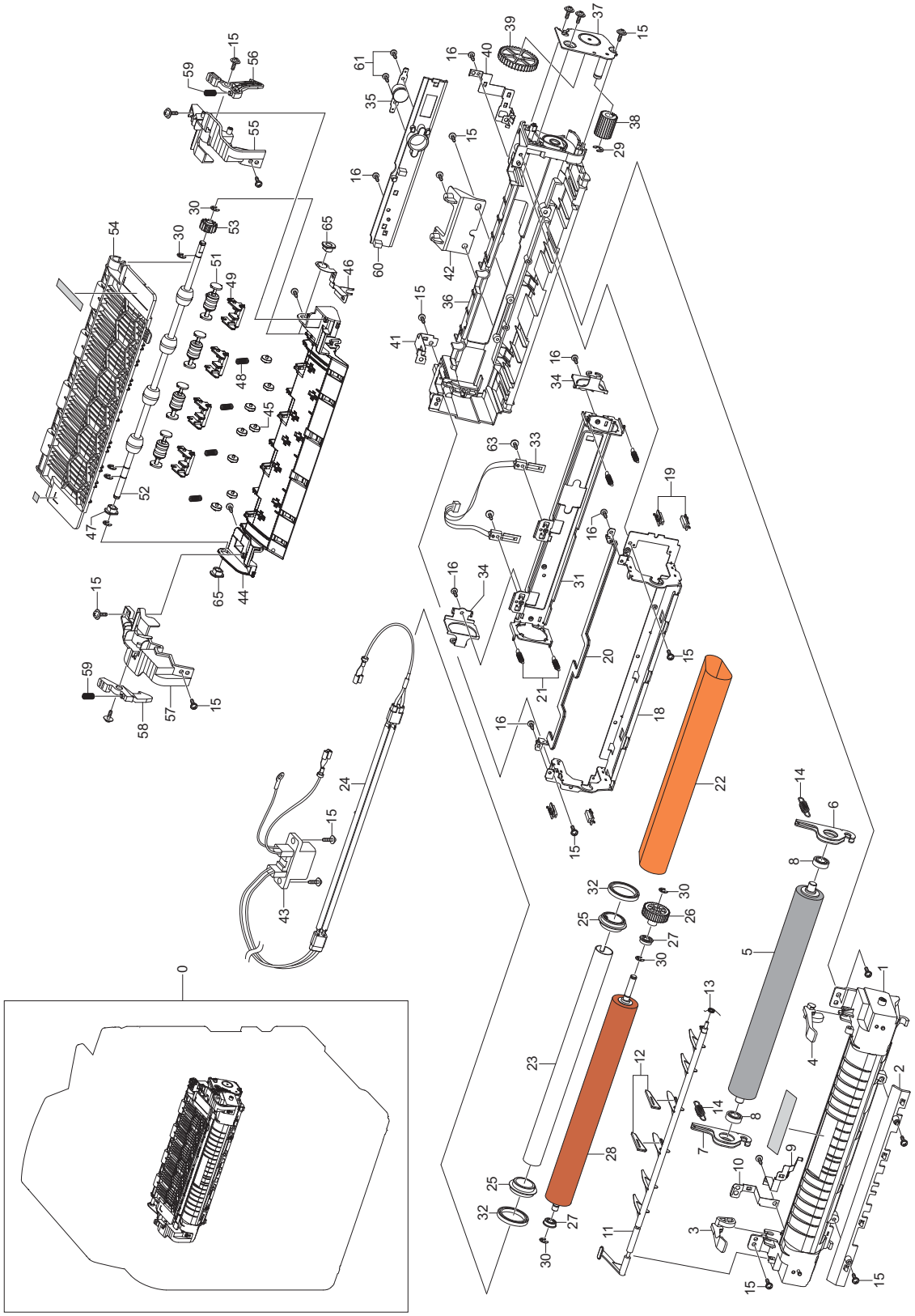


Feed Drive Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.11-0	JC97-02854A	MEA UNIT-FEED DRIVE	1	SA	
5.11-1	JC66-01385A	GEAR-RDCN FEED(79/39)	1	SNA	
5.11-2	JC66-01383A	GEAR-RDCN FEED(43/23)	1	SNA	
5.11-3	JC66-01382A	GEAR-RDCN FEED(35/22)	1	SNA	
5.11-4	JC66-01363A	GEAR-DRV MAIN PICK-UP	1	SNA	
5.11-5	JC66-01384A	GEAR-RDCN FEED(55/54)	1	SNA	
5.11-6	JC61-01835A	BRACKET-FEED DRIVE	1	SNA	

5.12 Fuser Unit



Fuser Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

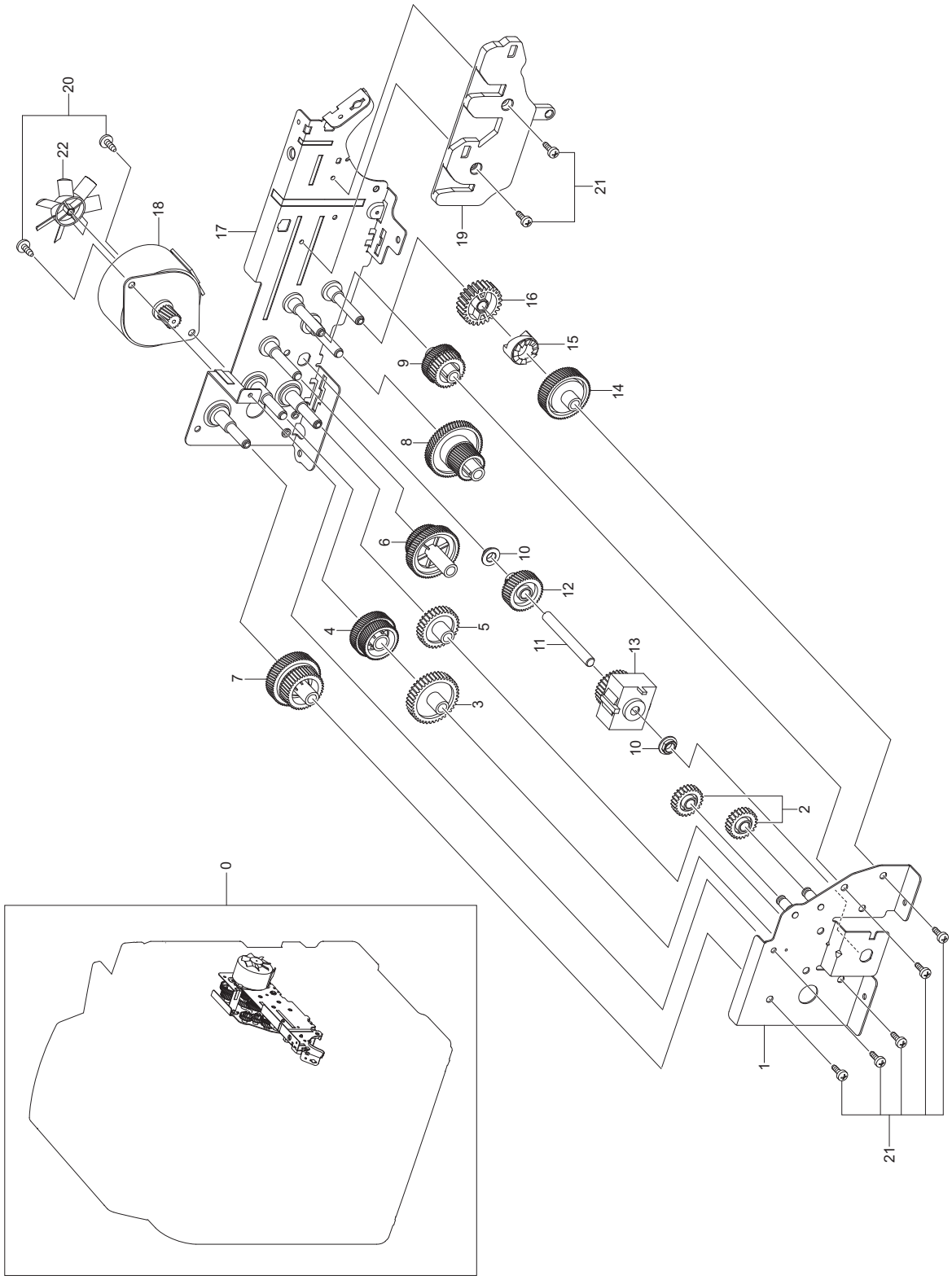
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.12-0	JC91-00934A	FUSER	1	SA	110V
5.12-0	JC91-00933A	FUSER	1	SA	220V
5.12-1	JC63-01312A	COVER-FUSER_LOWER	1	SNA	
5.12-2	JC61-01933A	GUIDE-INPUT	1	SNA	
5.12-3	JC66-01417A	LEVER-JAM_L	1	SNA	
5.12-4	JC66-01416A	LEVER-JAM_R	1	SNA	
5.12-5	JC66-01412B	ROLLER-PRESSURE	1	SA	
5.12-6	JC61-01917A	BRACKET-PR_R	1	SNA	
5.12-7	JC61-01916A	BRACKET-PR_L	1	SNA	
5.12-8	6601-001341	BEARING-BALL	2	SA	
5.12-9	JC63-01308A	GROUND-PR	1	SNA	
5.12-10	JC63-01335A	GROUND-PR_SUB	1	SNA	
5.12-11	JC66-01404A	ACTUATOR-FUSER	1	SA	
5.12-12	JC61-01938A	GUIDE-ACTUATOR	2	SNA	
5.12-13	JC61-70903A	SPRING ETC-ACTUATOR	1	SA	
5.12-14	6107-001323	SPRING-ES	2	SA	
5.12-15	6003-000196	SCREW-TAPTITE	24	SNA	
5.12-16	6003-000269	SCREW-TAPTITE	6	SNA	
5.12-18	JC61-01915A	BRACKET-FUSER	1	SNA	
5.12-19	JC61-01931A	HOLDER-BRACKET	4	SNA	
5.12-20	JC61-01921A	SUPPORT-BRACKET	1	SNA	
5.12-21	6107-001324	SPRING-ES	4	SA	
5.12-22	JC66-01413C	DRUM-FUSER_BELT	1	SA	
5.12-23	JC66-01411A	ROLLER-HEAT	1	SA	
5.12-24	4713-001229	LAMP-HALOGEN	1	SA	220V
5.12-24	4713-001228	LAMP-HALOGEN	1	SA	110V
5.12-25	JC61-01928A	BUSH-HR	2	SNA	
5.12-26	JC66-01405A	GEAR-FUSER	1	SA	
5.12-27	6601-001478	BEARING-BALL	2	SNA	
5.12-28	JC66-01410C	ROLLER-FUSER	1	SA	
5.12-29	6044-000231	RING-E	1	SA	
5.12-30	6044-000125	RING-E	7	SNA	
5.12-31	JC61-01918A	BRACKET-HR	1	SNA	
5.12-32	6601-001479	BEARING-BALL	2	SA	
5.12-33	1404-001486	THERMISTOR-NTC ASSY	1	SA	
5.12-34	JC61-01920A	HOLDER-LAMP	2	SNA	
5.12-35	4712-001046	THERMOSTAT	1	SA	
5.12-36	JC63-01311A	COVER-FUSER_UPPER	1	SNA	
5.12-37	JC61-01919A	BRACKET-FU_DRIVE	1	SNA	

Fuser Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.12-38	JC66-01406A	GEAR-IDLE Z15	1	SA	
5.12-39	JC66-01407A	GEAR-IDLE Z39	1	SA	
5.12-40	JC63-01309A	GROUND-UPPER	1	SNA	
5.12-41	JC63-01307A	GROUND-LOWER	1	SNA	
5.12-42	JC61-01929A	HOLDER-CONNECTOR	1	SNA	
5.12-43	JC39-00667A	HARNESS-FUSER DRAW_F,CLP-660	1	SNA	220V
5.12-43	JC39-00668A	HARNESS-FUSER DRAW_F,CLP-660	1	SNA	110V
5.12-44	JC61-01934A	GUIDE-OUTPUT	1	SNA	
5.12-45	JC66-00608A	ROLLER-EXIT IDLE	11	SNA	
5.12-46	JC63-01310A	GROUND-EXIT	1	SNA	
5.12-47	JC61-00423A	BUSH-6_D	1	SA	
5.12-48	JC61-70911A	SPRING ETC-EXIT ROLL FD	4	SNA	
5.12-49	JC61-02853A	HOLDER-EXIT	4	SNA	
5.12-51	JC66-02112A	PMO-ROLLER FD F	4	SA	
5.12-52	JC66-02111A	ROLLER-EXIT	1	SA	
5.12-53	JC66-00782A	GEAR-_M_EXIT	1	SNA	
5.12-54	JC61-01935A	GUIDE-DUPLEX	1	SNA	
5.12-55	JC64-00311A	HANDLE-FUSER_R	1	SNA	
5.12-56	JC64-00309A	LOCKER-FUSER_R	1	SNA	
5.12-57	JC64-00312A	HANDLE-FUSER_L	1	SNA	
5.12-58	JC64-00310A	LOCKER-FUSER_L	1	SNA	
5.12-59	JC61-00550A	SPRING ETC-DEVE REAR	2	SNA	
5.12-60	JC61-01930A	HOLDER-HARNESS	1	SNA	
5.12-61	6003-000282	SCREW-TAPTITE	2	SNA	
5.12-63	6003-000267	SCREW-TAPTITE	2	SA	
5.12-64	JC39-01049A	HARNESS-FUSER GND	1	SA	
5.12-65	JC61-00884A	BUSH-6_D(L)	2	SA	
5.12-66	JC61-02657A	HOLDER-THERMISTOR	1	SA	

5.13 Fuser Drive

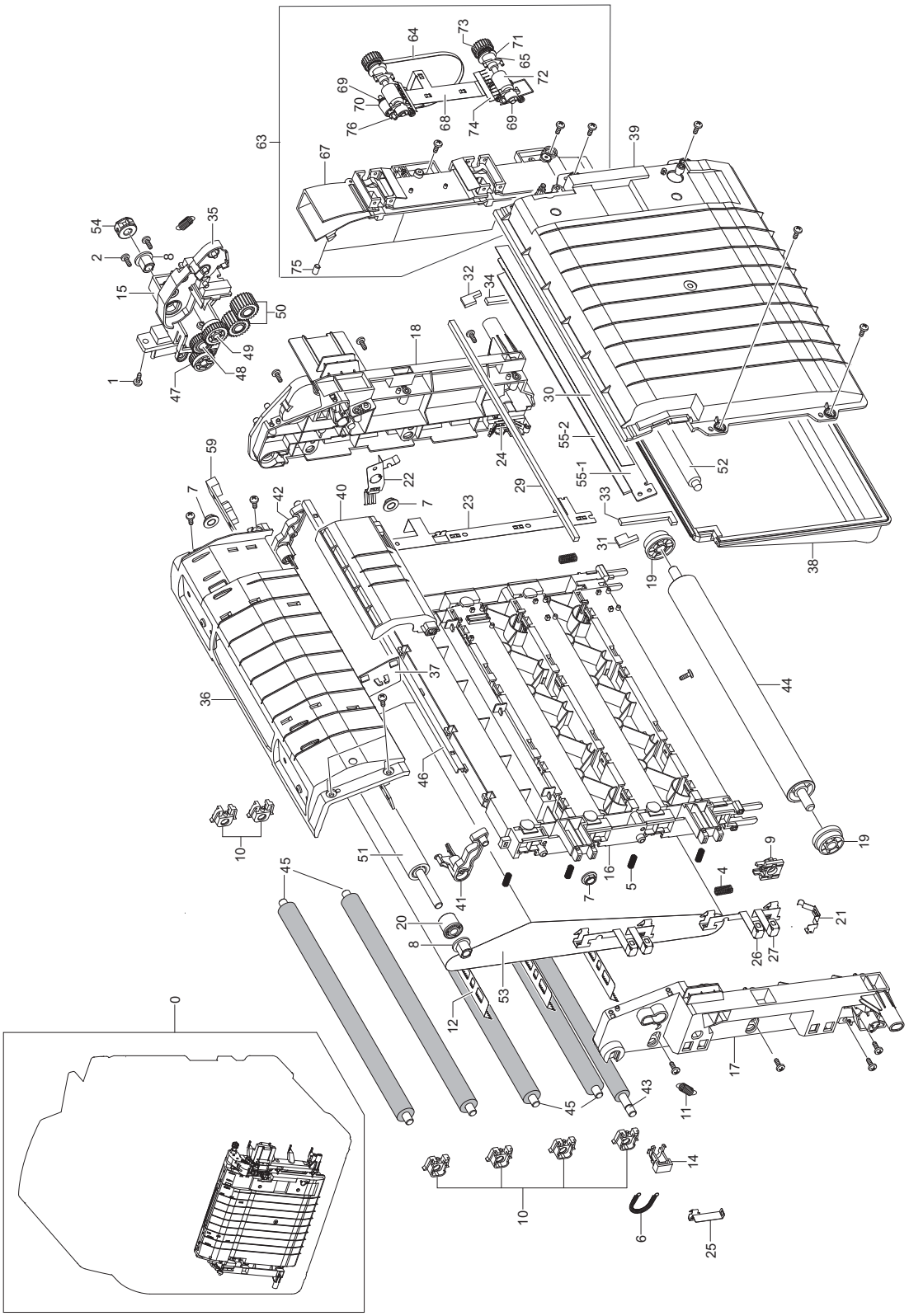


Fuser Drive Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.13-0	JC96-04501B	ELA UNIT-FUSER BLDC	1	SNA	
5.13-1	JC61-01859A	BRACKET-FUSER DRIVE L	1	SNA	
5.13-2	JC66-01371A	GEAR-IDLE EXIT	2	SNA	
5.13-3	JC66-01393A	GEAR-IDLE DEVE	1	SNA	
5.13-4	JC66-01392A	GEAR-RDCN FU	1	SNA	
5.13-5	JC66-01368A	GEAR-IDLE DEVE	1	SNA	
5.13-6	JC66-01386A	GEAR-RDCN FU	1	SNA	
5.13-7	JC66-01387A	GEAR-RDCN FU	1	SNA	
5.13-8	JC66-01388A	GEAR-RDCN FU	1	SNA	
5.13-9	JC66-01381A	GEAR-RDCN EXIT	1	SNA	
5.13-10	JC61-00699A	BUSH-D6/L4	2	SA	110V
5.13-11	JC66-01341A	SHAFT-CLUTCH FU	1	SNA	220V
5.13-12	JC66-01366A	GEAR-IDLE DEVE	1	SNA	
5.13-13	JC47-00006D	CLUTCH-BK DEVE	1	SNA	110V
5.13-14	JC66-01362A	GEAR-DRV FU	1	SNA	220V
5.13-15	JC66-01070A	LATCH-M-HUB CLUTCH	1	SNA	
5.13-16	JC66-01155A	GEAR-FUSER RDCN OUT V	1	SA	
5.13-17	JC61-01860A	BRACKET-FUSER DRIVE R	1	SNA	
5.13-18	JC31-00076A	MOTOR STEP	1	SA	
5.13-19	JC61-01851A	GUIDE-FUSER R	1	SNA	
5.13-20	6003-000301	SCREW-TAPTITE	2	SNA	
5.13-21	6003-000269	SCREW-TAPTITE	7	SNA	
5.13-22	JC72-00825A	PMO-IMPELLER_DRV	1	SNA	

5.14 PTB


0
1
2
4
5
6
7
8
9
10
11
12
14
15
16
17
18
19
20
21
22
23
24
25
26
27
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55-1
55-2
59
63
64
65
67
68
69
70
71
72
73
74
75
76

PTB Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

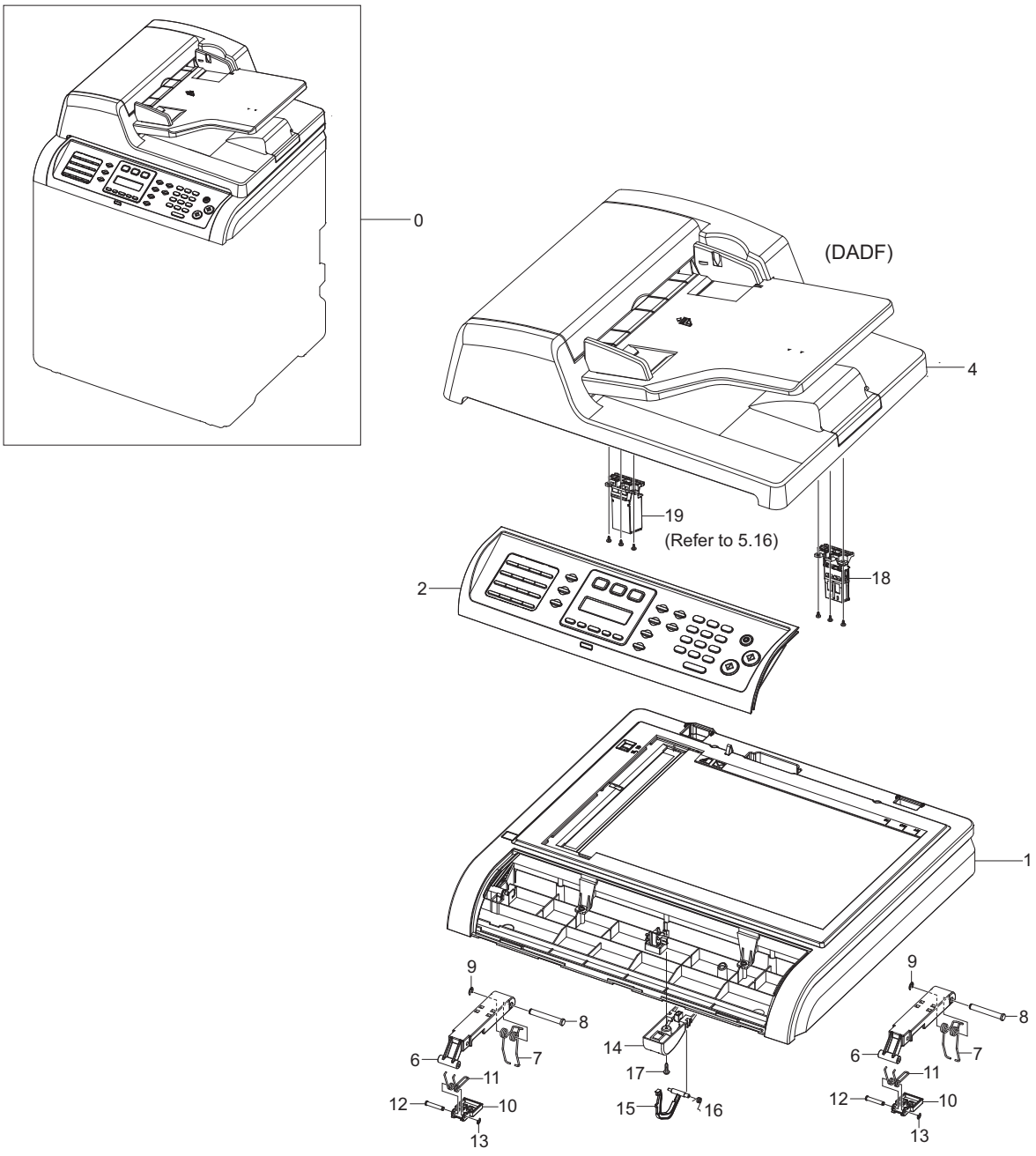
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.14-0	JC96-04406A	ELA UNIT-PTB SET_DUPLEX	1	SA	
5.14-1	6003-000196	SCREW-TAPTITE	10	SNA	
5.14-2	6003-000282	SCREW-TAPTITE	16	SNA	
-	6043-001097	PIN-SPRING	2	SNA	
5.14-4	6107-001364	SPRING-CS	2	SNA	
5.14-5	6107-001365	SPRING-CS	8	SNA	
5.14-6	6107-001316	SPRING-ES	2	SNA	
5.14-7	JC61-00699A	BUSH-D6/L4	3	SA	
5.14-8	JC61-00884A	BUSH-6_D(L)	2	SNA	
5.14-9	JC61-01092A	HOLDER-M-TENSION	2	SNA	
5.14-10	JC61-01093A	HOLDER-M-TRANSFER	8	SNA	
5.14-11	JC61-01678A	SPRING ETC-DEV_FRONT	2	SNA	
5.14-12	JC61-01754A	PLATE-SAW FUSER	3	SNA	
-	JC61-01820A	HOLDER-PAPER C,L	1	SNA	
5.14-14	JC61-01821A	HOLDER-PAPER C,R	1	SNA	
5.14-15	JC61-01822A	HOLDER-DRAW	1	SNA	
5.14-16	JC61-01823A	FRAME-PTB	1	SNA	
5.14-17	JC61-01824A	FRAME-DUMMY,L	1	SNA	
5.14-18	JC61-01825A	FRAME-DUMMY,R	1	SNA	
5.14-19	JC61-01826A	GUIDE-BELT	1	SNA	
5.14-20	JC61-01827A	GUIDE-DRIVE	2	SNA	
5.14-21	JC61-01828A	PLATE-DUMMY TENSION	1	SNA	
5.14-22	JC61-01829A	PLATE-GROUND BACKUP	1	SNA	
5.14-23	JC61-01830A	PLATE-GROUND PTB	1	SNA	
5.14-24	JC61-01831A	PLATE-GROUND TENSION	1	SNA	
5.14-25	JC61-01832A	PLATE-HV PCR	1	SNA	
5.14-26	JC61-01833A	PLATE-HV TR_M	2	SNA	
5.14-27	JC61-01834A	PLATE-HV TR_Y	2	SNA	
-	JC61-02179A	PLATE-GND RESISTANCE	1	SNA	
5.14-29	JC62-00163A	SEAL-WASTE BOTTOM	1	SNA	
5.14-30	JC62-00166A	SEAL-WASTE FILM	1	SNA	
5.14-31	JC62-00355A	SEAL-BLADE PTB,L	1	SNA	
5.14-32	JC62-00356A	SEAL-BLADE PTB,R	1	SNA	
5.14-33	JC62-00357A	SEAL-BRKT PTB,L	1	SNA	
5.14-34	JC62-00358A	SEAL-BRKT PTB,R	1	SNA	
5.14-35	JC63-01267A	COVER-DUPLEX GEAR	1	SNA	
5.14-36	JC63-01268A	COVER-UPPER PTB	1	SNA	
5.14-37	JC63-01269A	COVER-HANDLE INNER	1	SNA	
5.14-38	JC63-01270A	COVER-WASTE TONER,L	1	SNA	

PTB Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.14-39	JC63-01271A	COVER-WASTE TONER,U	1	SNA	
5.14-40	JC64-00296A	HANDLE-LOCKER PTB	1	SNA	
5.14-41	JC64-00297A	LOCKER-PTB,L	1	SNA	
5.14-42	JC64-00298A	LOCKER-PTB,R	1	SNA	
5.14-43	JC66-00918A	ROLLER-PAPER CHARGE	1	SNA	
5.14-44	JC66-00920A	ROLLER-TENSION,PTB	1	SNA	
5.14-45	JC66-00922B	ROLLER-TRANSFER	4	SNA	
5.14-46	JC66-01089A	SHAFT-P-LOCKBAR REAR	1	SNA	
5.14-47	JC66-01322A	GEAR-DUPDRIVE Z34	1	SNA	
5.14-48	JC66-01323A	GEAR-DUPIDLE Z33	1	SNA	
5.14-49	JC66-01324A	GEAR-DUPRDCN Z2923	1	SNA	
5.14-50	JC66-01325A	GEAR-DUPIDLE Z21	2	SNA	
5.14-51	JC66-01331A	ROLLER-DRIVE PTB	1	SNA	
5.14-52	JC66-01332A	ROLLER-BACKUPCLEAN	1	SNA	
5.14-53	JC66-01333A	DRUM-PTB BELT	1	SNA	
5.14-54	JC67-00213A	COUPLER-PTB	1	SNA	
5.14-55	JC97-02247B	MEA UNIT-CLEANING PTB	1	SNA	
5.14-55-1	JC61-01109A	BRACKET-P-CLN,PTB	1	SNA	
5.14-55-2	JC61-01280B	BLADE-CLEANING PTB	1	SNA	
-	JC92-02182A	PBA SUB-PTB CRUM	1	SNA	
5.14-59	JC32-00006A	SENSOR-CTD	2	SA	
-	JC39-00664A	HARNESS-PTB DRAW_P	1	SNA	
-	JC39-00653A	HARNESS-ACR_SENSOR	1	SNA	
5.14-62	2009-001197	R-METAL GLAZE	1	SNA	
5.14-63	JC97-02898A	MEA UNIT-DUPLEX	1	SNA	
5.14-64	6602-001084	BELT-TIMING GEAR	1	SA	
5.14-65	JC61-00665A	BUSH-M-FEED, DUP	4	SA	
-	JC61-01277A	SPRING ETC-DUP	2	SA	
5.14-67	JC61-01839A	GUIDE-ALIGN-DUP	1	SNA	
5.14-68	JC63-01297A	GROUND-ALIGN_DUP	1	SNA	
5.14-69	JC66-00444A	SHAFT-IDLE ROLL, DUP	2	SA	
5.14-70	JC66-01923A	ROLLER-M-IDLE_DUP	2	SNA	
5.14-71	JC66-00900A	PULLEY-M-18-DUMMY_DUP	2	SA	
5.14-72	JC66-01906A	ROLLER-FEED_DUP	2	SNA	
5.14-73	JC66-01400A	GEAR	2	SNA	
5.14-74	JC67-00205A	BRUSH-DUPLEX	2	SNA	
5.14-75	JC70-00457A	ICT-STUD PAPER GUIDE, DP	3	SA	
5.14-76	JK72-00058A	PCT-SILP WASHER	4	SNA	

5.15 Scan Ass'y

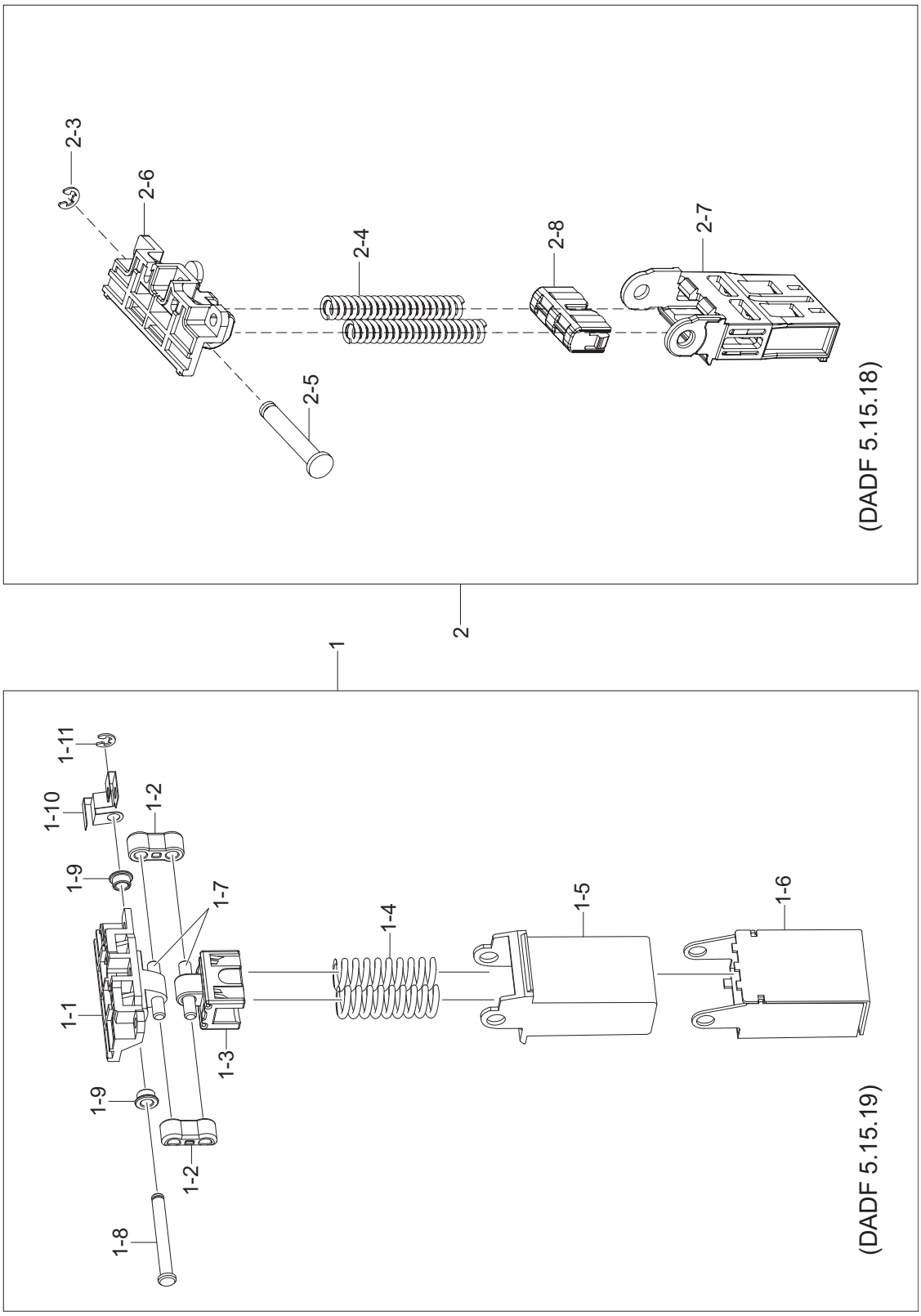


Scan Ass'y Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.15-0	JC96-05541A	ELA HOU-SCAN	1	SA	110V
5.15-0	JC97-03576A	SCANNER-ICON	1	SA	220V
5.15-1	JC96-05532A	ELA HOU-PLATEN	1	SA	
5.15-1	JC96-05529A	ELA HOU-OPE	1	SA	110V
5.15-2	JC97-03577A	ELA HOU-OPE	1	SA	220V
5.15-4	JC96-05540A	ELA HOU-DADF	1	SA	
5.15-6	JC61-02214A	SUPPORT-SCAN	2	SNA	
5.15-7	JC61-02448A	SPRING ETC-SUPPORT	2	SA	
5.15-8	JC66-01830A	SHAFT-HINGE SCAN	2	SNA	
5.15-9	6044-000125	RING-E	2	SNA	
5.15-10	JC61-02491A	SUPPORT-DAMPER	2	SNA	
5.15-11	JC61-02511A	SPRING ETC-DAMPER	2	SA	
5.15-12	JC66-01907A	SHAFT-DAMPER HINGE	2	SNA	
5.15-13	6044-000159	RING-C	2	SNA	
5.15-14	JC63-01564B	COVER-OUTBIN	1	SNA	Option Unit
5.15-15	JC66-01624A	ACTUATOR-OUT_FULL	1	SNA	
5.15-16	JB61-00076A	SPRING ETC-TORSION DOC (CC2-F)	1	SNA	110V
5.15-17	6003-000196	SCREW-TAPTITE	1	SNA	220V
5.15-18	JC97-02779B	MEA UNIT-HINGE	1	SNA	110V
5.15-19	JC97-03038B	MEA UNIT-HINGE_DADF	1	SA	220V

5.16 Hinge Unit

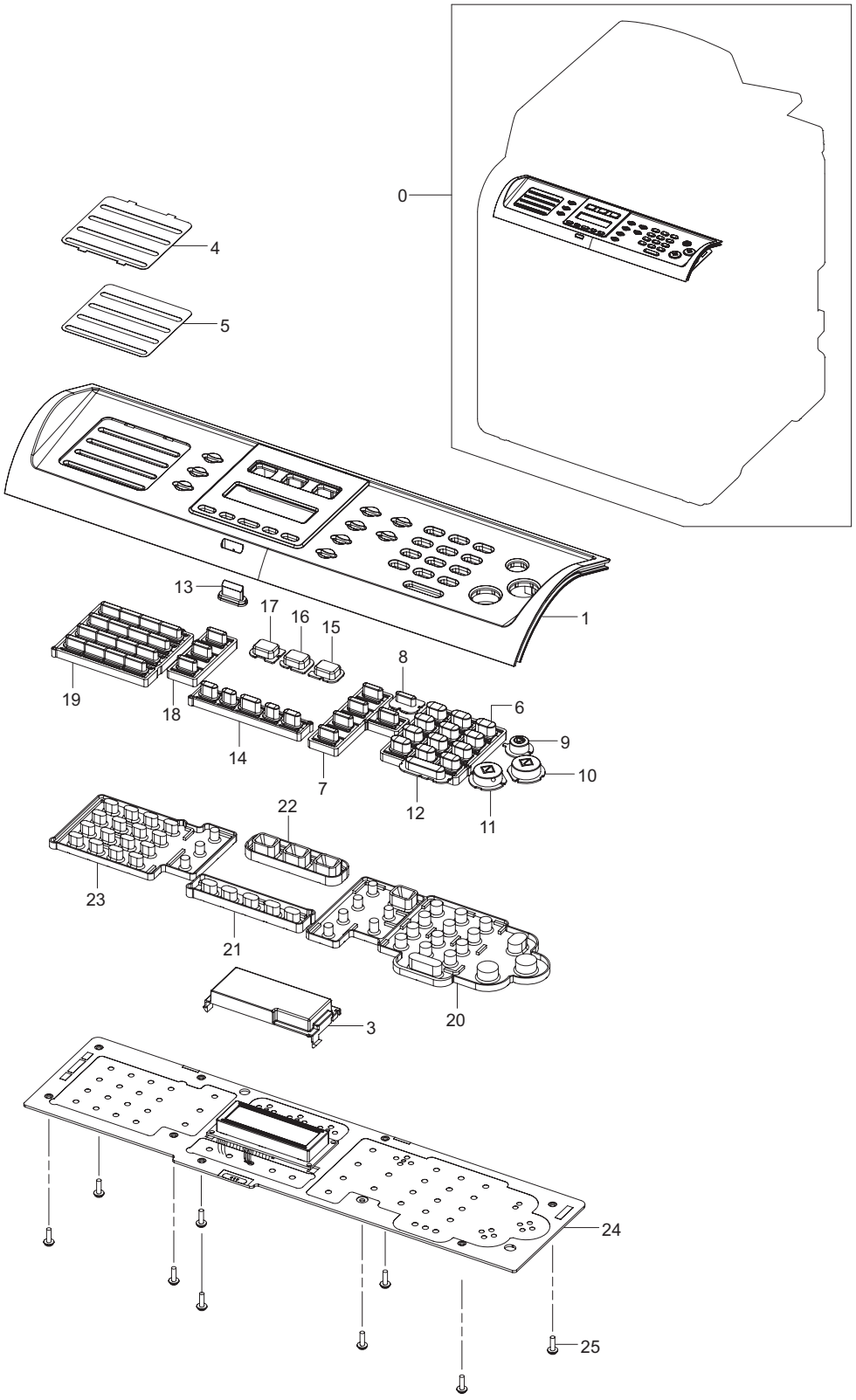


Hinge Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.16-1	JC97-03038B	MEA UNIT-HINGE_DADF	1	SA	
5.16-1-1	JC61-02224B	HINGE-PLATEN	1	SNA	
5.16-1-2	JC61-01432A	HINGE-M_LINK L	2	SNA	
5.16-1-3	JC61-02223A	HINGE-SLIDER	1	SNA	
5.16-1-4	6107-001354	SPRING-CS	2	SA	110V
5.16-1-5	JC61-02248B	HINGE-SCAN	1	SNA	220V
5.16-1-6	JC61-02183A	HOUSING-HINGE_SCAN	1	SNA	
5.16-1-7	JC66-01811A	SHAFT-LINK	2	SNA	
5.16-1-8	JC66-01810A	SHAFT-HINGE	1	SNA	
5.16-1-9	JC61-01686A	BUSH-4D_FE	2	SNA	
5.16-1-10	JC63-01568A	GROUND-HINGE	1	SNA	
5.16-1-11	6044-000159	RING-C	1	SNA	
5.16-2	JC97-02997B	MEA UNIT-HINGE	1	SA	
5.16-2-3	6044-000159	RING-C	1	SNA	Option Unit
5.16-2-4	6107-001303	SPRING-CS	2	SNA	
5.16-2-5	JB70-00236A	ICT-HINGE SHAFT	1	SNA	110V
5.16-2-6	JC66-01991B	CAM-HINGE_ADF	1	SNA	220V
5.16-2-7	JC61-00696C	HINGE-FRAME	1	SNA	110V
5.16-2-8	JC61-00697A	HINGE-M-PPRESSURE	1	SNA	220V

5.17 OPE

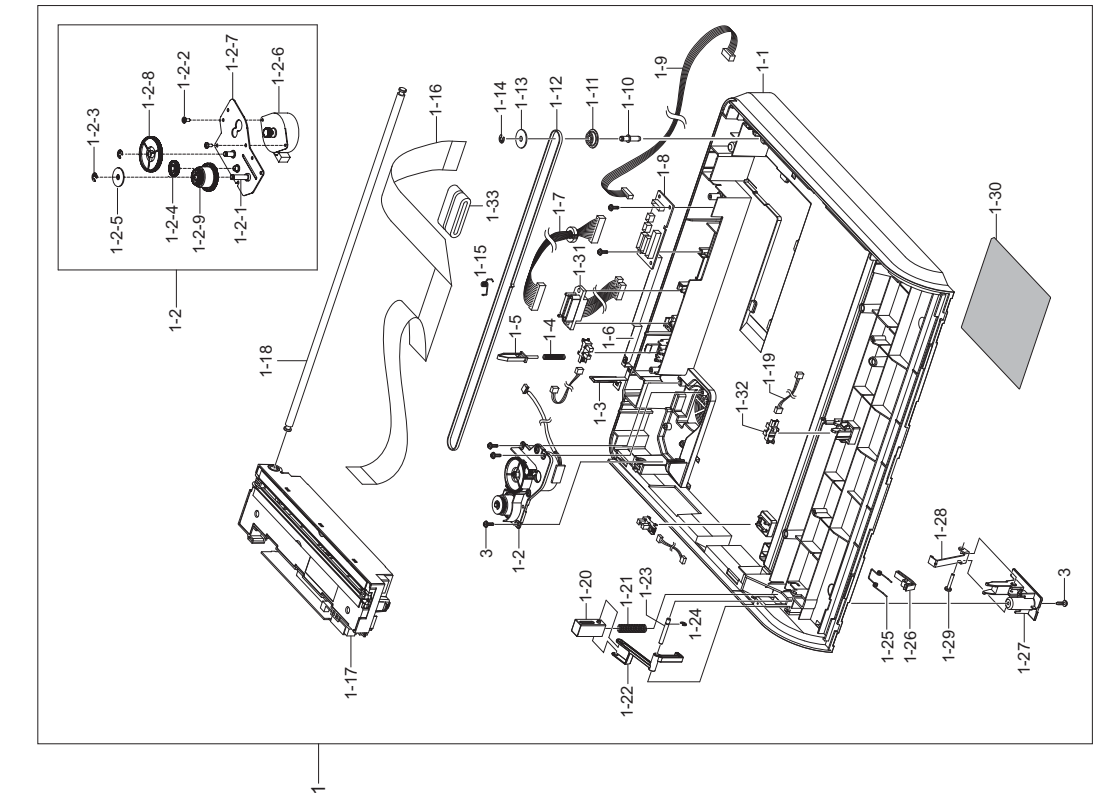


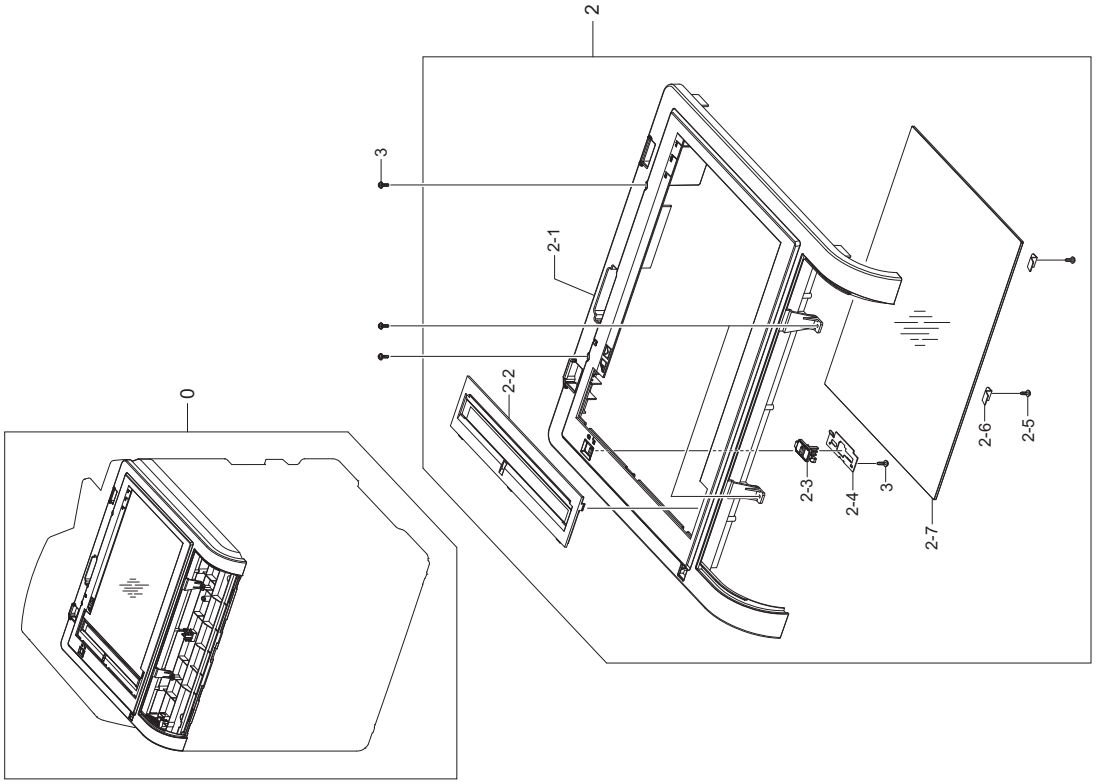
OPE 4in1 Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.17-0	JC97-03577A	OPE-COVER	1	SA	
5.17-1	JC63-02170A	COVER-OPE	1	SNA	DEL
5.17-1	JC63-02170B	COVER-OPE	1	SNA	DEH
5.17-3	JC63-01510A	COVER-LCD	1	SNA	
5.17-4	JC63-00999A	SHEET-ONETOUCH	1	SA	
5.17-5	JC68-01639A	LABEL-ONETOUCH	1	SA	
5.17-6	JC64-00239E	KEY-M_TEL	1	SNA	
5.17-7	JC64-00245E	KEY-M_MODE COPY	1	SNA	
5.17-8	JC64-00244A	KEY-M_BLACK	1	SNA	
5.17-9	JC64-00242A	KEY-M_STOP CLEAR	1	SNA	
5.17-10	JC64-00259A	KEY-M-START COLOR	1	SNA	
5.17-11	JC64-00243A	KEY-M_START BLACK	1	SA	
5.17-12	JC64-00249E	KEY-M_ON HOOK	1	SNA	
5.17-13	JC67-00265A	LENS LED-STATUS	1	SNA	
5.17-14	JC64-00248E	KEY-M_MENU	1	SNA	
5.17-15	JC64-00247D	KEY-M_MODE SCAN	1	SNA	
5.17-16	JC64-00245E	KEY-M_MODE COPY	1	SNA	
5.17-17	JC64-00246D	KEY-M_MODE FAX	1	SNA	
5.17-18	JC64-00241E	KEY-M_FAX	1	SNA	
5.17-19	JC64-00250D	KEY-M_ONETOUCH	1	SNA	
5.17-20	JC73-00261A	RUBBER-TEL	1	SA	
5.17-21	JC73-00230A	RUBBER-MENU	1	SNA	
5.17-22	JC73-00233A	RUBBER-MODE	1	SNA	
5.17-23	JC73-00262A	RUBBER-ONETOUCH	1	SA	
5.17-24	JC92-01951A	PBA-OPE	1	SA	
5.17-25	6003-000196	SCREW-TAPTITE	9	SNA	

5.18 Platen Ass'y





Platen Ass'y Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

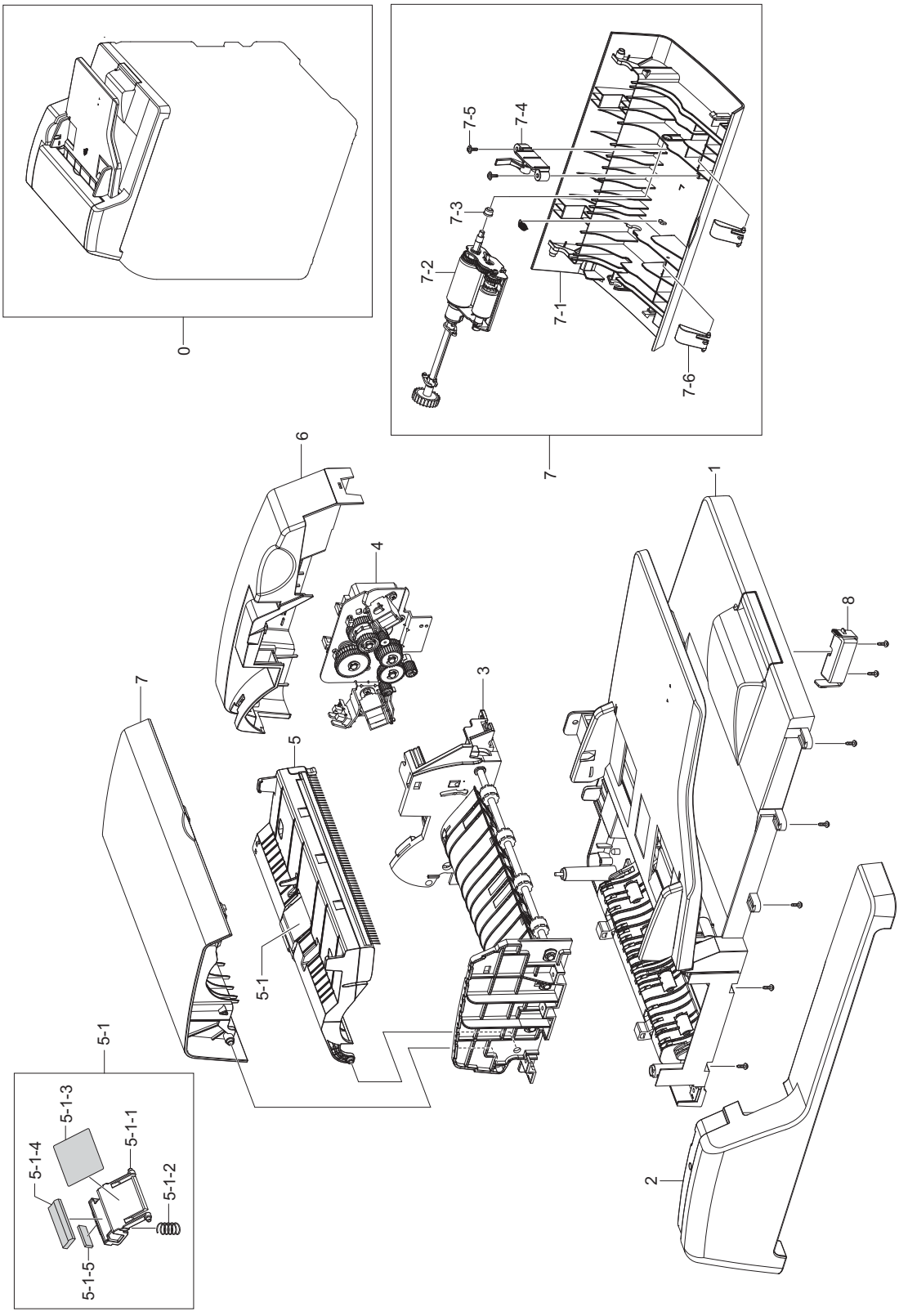
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.18-0	JC96-05532A	ELA HOU-PLATEN	1	SA	
5.18-1	JC96-05536A	ELA HOU-SCAN LOWER	1	SA	
5.18-1-1	JC63-01505B	COVER-SCAN LOWER	1	SNA	
5.18-1-2	JC96-05285A	ELA HOU-BRACKET MOTOR	1	SA	
5.18-1-2-2	6003-000269	SCREW-TAPITE	1	SNA	
5.18-1-2-3	6044-000125	RING-E	2	SNA	
5.18-1-2-4	JB66-00083A	GEAR-IDLE	1	SNA	
5.18-1-2-5	JB72-00764A	PMO-HOLDER BELT	1	SNA	
5.18-1-2-6	JC31-00104A	MOTOR STEP	1	SA	
5.18-1-2-7	JC61-02747A	BRACKET-MOTOR	1	SA	
5.18-1-2-8	JC66-00530A	GEAR-REDUCTION73/37	1	SA	
5.18-1-2-9	JC66-00531A	GEAR-TIMING	1	SA	
5.18-1-3	JC63-01565A	GROUND-CONNECTION	1	SNA	
5.18-1-4	6107-001135	SPRING-CS	1	SNA	
5.18-1-5	JC72-00755A	PMO-LEVER SENSOR	1	SA	
5.18-1-6	JC63-01559A	GROUND-SCAN LOWER	1	SNA	
5.18-1-7	JC39-00848A	HARNESS-SCAN	1	SA	
5.18-1-8	JC92-01952A	PBA-SCAN	1	SA	
5.18-1-9	JC39-00849A	HARNESS-OPE	1	SA	
5.18-1-10	JB70-00154A	ICT-INSERT SHAFT	1	SNA	
5.18-1-11	JB72-00763A	PMO-PULLEY	1	SNA	
5.18-1-12	6602-001067	BELT-TIMING GEAR	1	SNA	
5.18-1-13	JB72-00764A	PMO-HOLDER BELT	1	SNA	
5.18-1-14	6044-000125	RING-E	3	SNA	
5.18-1-15	JB61-00059A	SPRING ETC-BELT	1	SA	
5.18-1-16	JC39-00858A	FLAT CABLE	1	SNA	
5.18-1-17	JC96-04605A	ELA UNIT-CCDM MIDDLE	1	SA	
5.18-1-18	JB70-00145A	ICT-SHAFT CCD	1	SNA	
5.18-1-19	JC39-00857A	HARNESS-BIN FULL	1	SA	
5.18-1-20	JC63-01552B	COVER-ADF LOCK UP	1	SNA	
5.18-1-21	6107-001363	SPRING-CS	1	SA	
5.18-1-22	JC66-01750A	LINK-SCAN LOCK	1	SNA	
5.18-1-23	JC66-01832A	SHAFT-SCAN LOCK	1	SNA	
5.18-1-24	6044-000159	RING-C	1	SNA	
5.18-1-25	JC61-02449A	SPRING ETC-REVERSE	1	SA	
5.18-1-26	JC66-01888A	LEVER-SCAN LOCK	1	SNA	
5.18-1-27	JC63-01555B	COVER-ADF LOCK LO	1	SNA	
5.18-1-28	JC61-02216A	PLATE-ADF LOCK	1	SNA	
5.18-1-29	JC66-01831A	SHAFT-ADF LOCK	1	SNA	

Platen Ass'y Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.18-1-30	JC68-01998A	LABEL-INFORMATION	1	SNA	
5.18-1-31	JC39-00850A	HARNESS-DADF LOWER	1	SA	
5.18-1-32	0604-001095	PHOTO-INTERRUPTER	3	SNA	
5.18-2	JC97-03561A	MEA-SCAN UPPER	1	SNA	
5.18-2-1	JC63-01506B	COVER-SCAN UPPER	1	SNA	
5.18-2-2	JC97-03093C	MEA-SCAN DUMMY UPPER	1	SA	
5.18-2-3	JC66-01523D	LEVER-LOCKER	1	SA	
5.18-2-4	JC61-01987A	BRACKET-LOCKER	1	SNA	
5.18-2-5	6002-000440	SCREW-TAPPING	2	SNA	
5.18-2-6	JB70-00148A	IPR-HOLDER GLASS	2	SA	
5.18-2-7	JC01-00001A	GLASS-SCAN	1	SA	
5.18-3	6003-000196	SCREW-TAPTITE	4	SNA	

5.19 DADF Ass'y

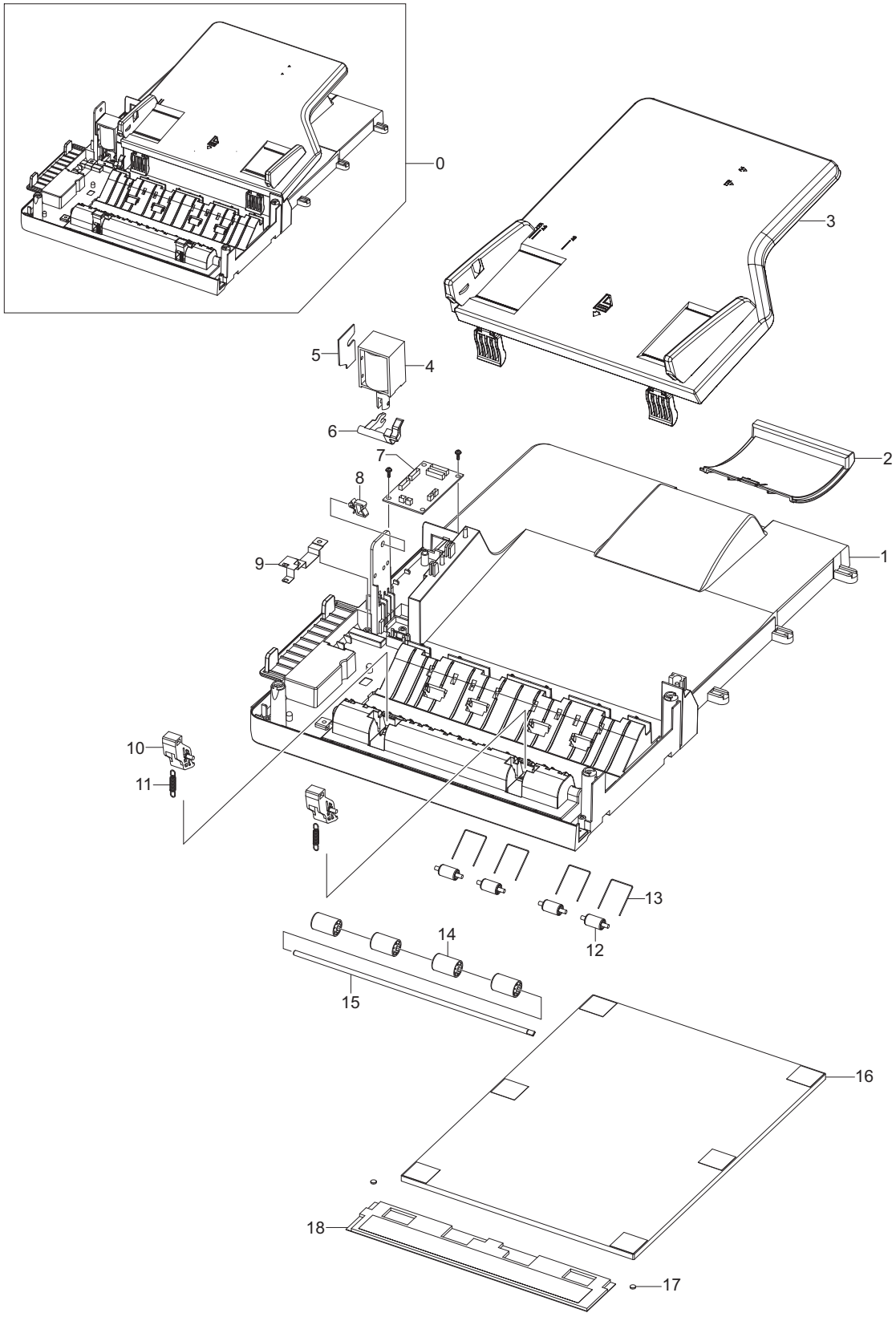


DADF Ass'y Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.19-0	JC96-05540A	ELA HOU-DADF	1	SA	
5.19-1	JC96-05535A	ELA HOU-COVER PLATEN	1	SA	
5.19-2	JC63-02168A	COVER-HANDLE_PLATEN	1	SNA	
5.19-3	JC96-05537A	ELA HOU-DADF LOWER	1	SA	
5.19-4	JC96-04816A	ELA HOU-DADF DRV	1	SA	
5.19-5	JC96-05534A	ELA HOU-DADF UPPER	1	SA	
5.19-5-1	JC97-03069A	MEA UNIT-DADF RUBBER	1	SA	
5.19-5-1-1	JC61-00744A	HOLDER-M-ADF RUBBER UPPER	1	SNA	
5.19-5-1-2	JC61-00387A	SPRING ETC-PAD	1	SNA	
5.19-5-1-3	JC63-00186A	SHEET-GUIDE ADF	1	SA	
5.19-5-1-4	JB73-00052A	RMO-ADF RUBBER	1	SNA	
5.19-5-1-5	JC73-00079A	RPR-SEAL SIDE	1	SNA	
5.19-6	JC63-01606C	COVER-DADF_R	1	SNA	
5.19-7	JC97-03559A	MEA UNIT-COVER OPEN	1	SA	
5.19-7-1	JC63-02171A	COVER-OPEN	1	SNA	
5.19-7-2	JC97-03070A	MEA UNIT-PICK UP DADF	1	SA	
5.19-7-3	JB72-00819A	PMO-BUSH	1	SNA	
5.19-7-4	JC97-03060A	MEA UNIT-STOPPER	1	SA	
5.19-7-5	6003-000196	SCREW-TAPTITE	2	SNA	
5.19-7-6	JC61-00788A	GUIDE-M_DOC SENSOR	2	SNA	
5.19-8	JC63-00998E	COVER-M_ADF CONNECTOR	1	SNA	

5.20 Platen Cover DADF

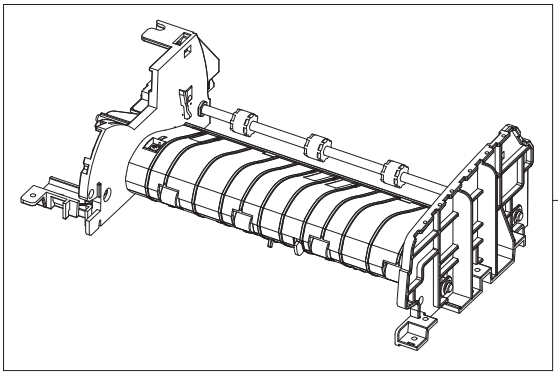


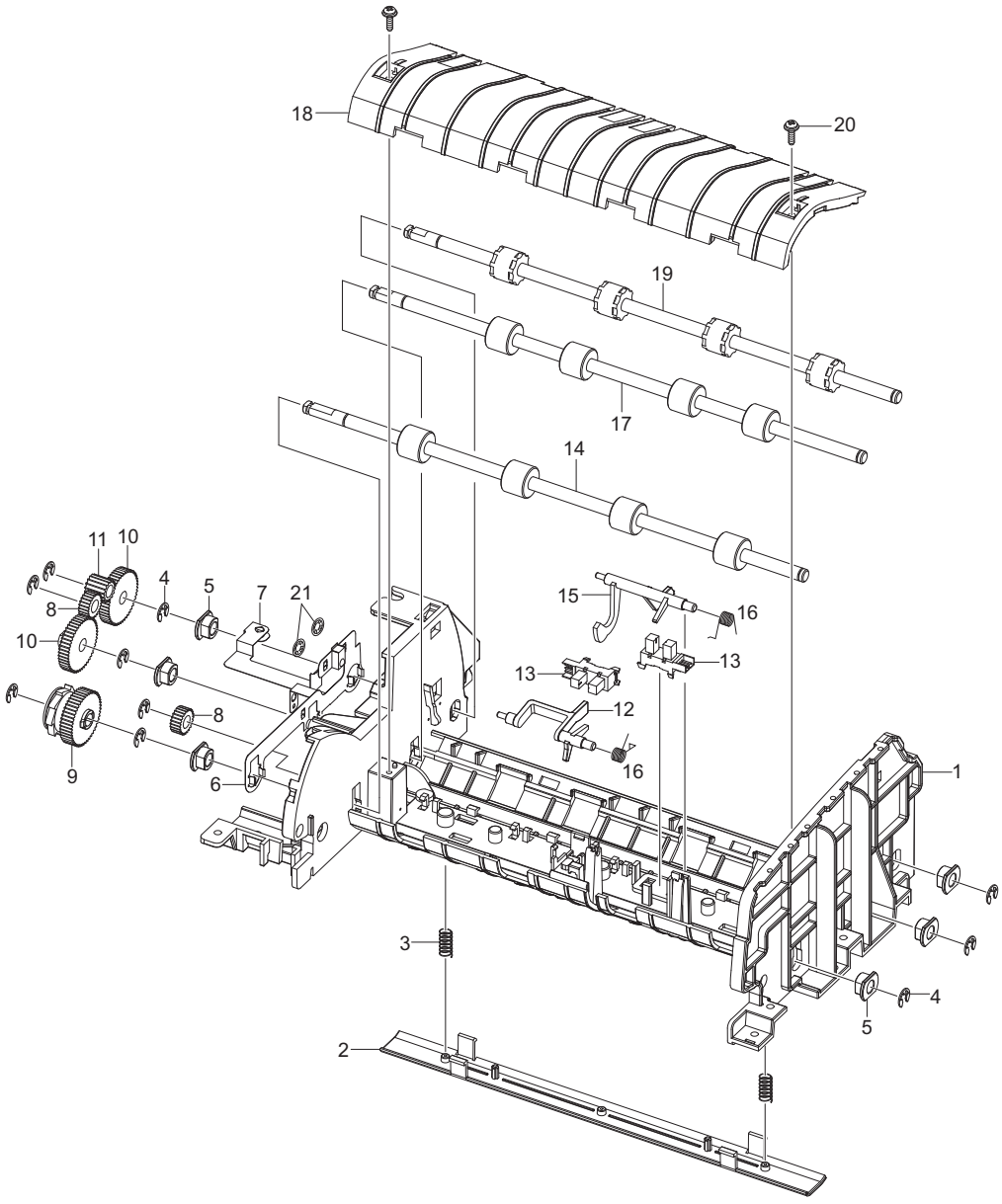
Platen Cover DADF Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.20-0	JC96-05535A	ELA HOU-COVER PLATEN	1	SA	
5.20-1	JC63-01623C	COVER-PLATEN	1	SNA	
5.20-2	JC61-02418C	GUIDE-EXTENSION	1	SNA	
5.20-3	JC97-03560A	MEA-TX STACKER	1	SA	
5.20-4	JC33-00031A	SOLENOID-LIFTING	1	SA	
5.20-5	JC69-01327A	PAD-SOLENOID	1	SNA	
5.20-6	JC66-01774A	LEVER-LIFTING_EXIT	1	SNA	
5.20-7	JC92-01954A	PBA-DADF	1	SA	
5.20-8	6502-001093	CABLE CLAMP	1	SNA	
5.20-9	JC63-01660A	GROUND-PLATEN	1	SA	
5.20-10	JC66-01749A	LEVER-JAM_FEED	2	SNA	
5.20-11	JC61-02427A	SPRING ETC-FEED IDLE	2	SNA	
5.20-12	JC66-01764A	ROLLER-IDLE	4	SNA	
5.20-13	JC61-02429A	SPRING ETC-MID IDLE	4	SNA	
5.20-14	JC66-01022A	ROLLER-M_IDLE SCF	4	SA	
5.20-15	JC66-01817A	SHAFT-FEED IDLE	1	SNA	
5.20-16	JC63-00209B	SHEET-WHITE SPONGE	1	SNA	
5.20-17	JC72-01440A	SPONGE-PLATEN DUMMY	1	SNA	
5.20-18	JC72-01439A	SPONGE-DADF PLATEN	1	SNA	

5.21 DADF lower



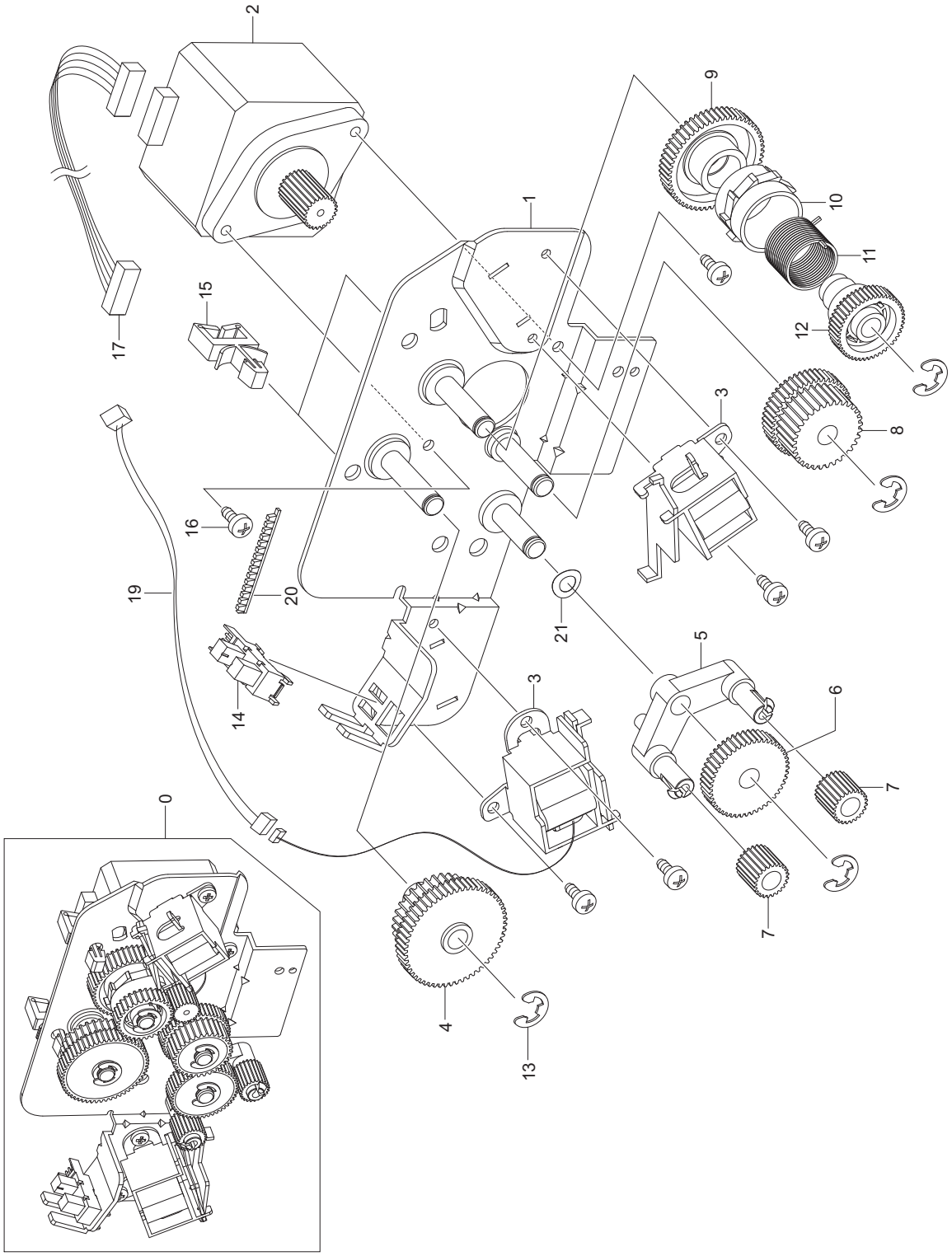


DADF lower Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.21-0	JC96-05537A	ELA HOU-DADF LOWER	1	SA	
5.21-1	JC63-01589A	COVER-DADF_LOWER	1	SNA	
5.21-2	JC61-01179A	PLATE-M_WHITE BAR	1	SNA	
5.21-3	6107-001135	SPRING-CS	2	SNA	
5.21-4	6044-000125	RING-E	10	SNA	
5.21-5	JC61-00423A	BUSH-6_D	6	SA	
5.21-6	JC63-01662A	GROUND-FEED EXIT	1	SA	
5.21-7	JC63-01661A	GROUND-DADF	1	SA	
5.21-8	JC66-01755A	GEAR-FEED IDLE D	2	SA	
5.21-9	JC97-03085A	MEA-GEAR FEED	1	SA	
5.21-10	JC66-01757A	GEAR-EXIT	2	SA	
5.21-11	JC66-01754A	GEAR-FEED IDLE C	1	SA	
5.21-12	JC66-01766A	ACTUATOR-FEED	1	SNA	
5.21-13	0604-001095	PHOTO-INTERRUPTER	2	SNA	
5.21-14	JC66-01823A	ROLLER-FEED	1	SA	
5.21-15	JC66-01762A	ACTUATOR-REGI	1	SNA	
5.21-16	JB61-00076A	SPRING ETC-TORSION DOC (CC2-F)	2	SNA	
5.21-17	JC66-01822A	ROLLER-MIDDLE	1	SA	
5.21-18	JC63-01597E	COVER-DADF_MIDDLE	1	SNA	
5.21-19	JC66-01824A	ROLLER-EXIT	1	SA	
5.21-20	6003-000196	SCREW-TAPTITE	2	SNA	
5.21-21	6044-000001	RING-CS	2	SA	

5.22 DADF Motor

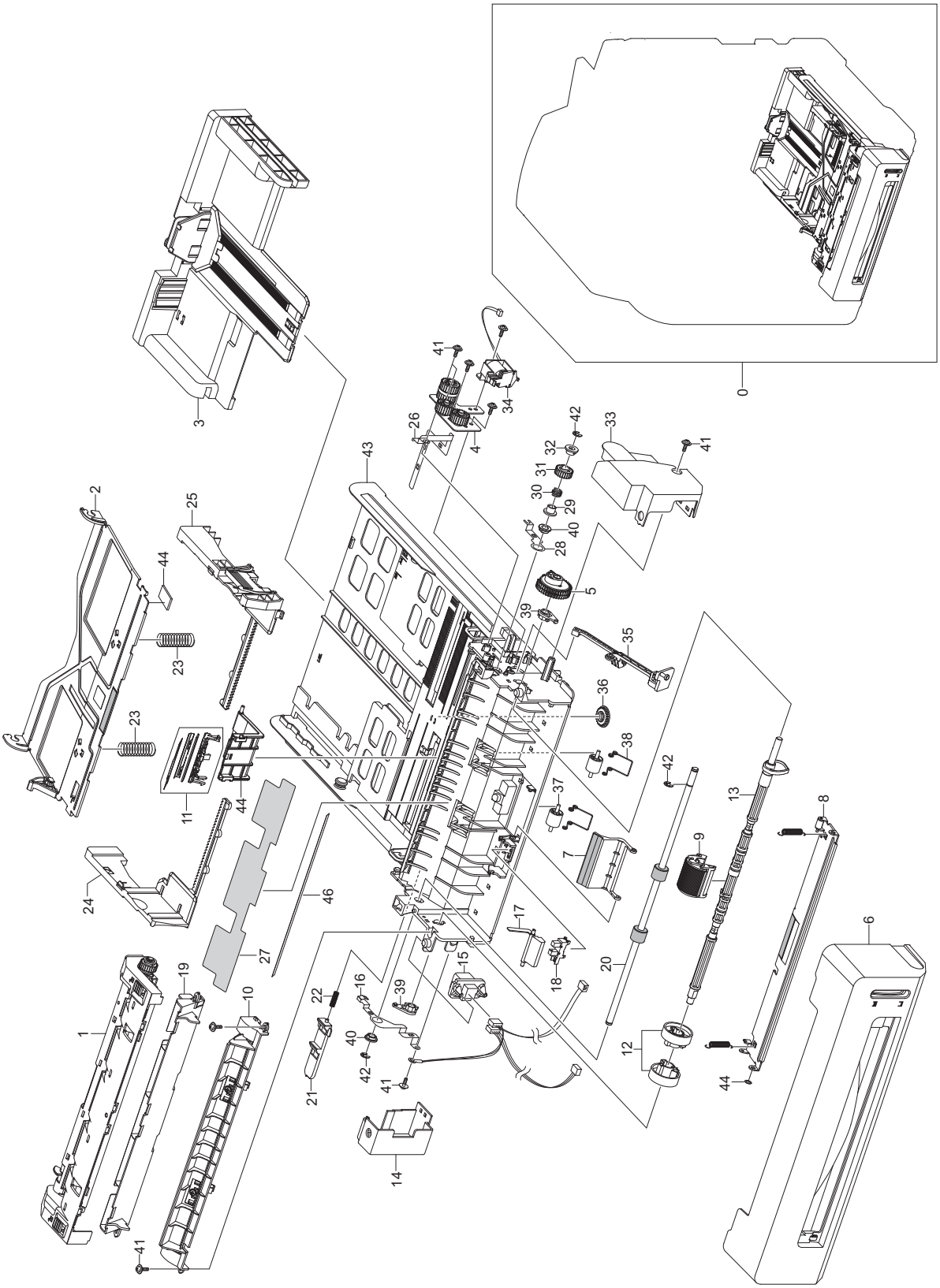


DADF Motor Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.22-0	JC96-04816A	ELA HOU-DADF DRV	1	SA	
5.22-1	JC61-02386A	BRACKET-DRIVE DADF	1	SNA	
5.22-2	JC31-00096A	MOTOR STEP	1	SA	
5.22-3	JC33-00030A	SOLENOID-DADF	2	SA	110V
5.22-4	JC66-01758A	GEAR-PICKUP IDLE	1	SA	220V
5.22-5	JC61-02278A	BRACKET-SWING	1	SNA	
5.22-6	JC66-01753A	GEAR-FEED IDLE B	1	SA	
5.22-7	JC66-01754A	GEAR-FEED IDLE C	2	SA	
5.22-8	JC66-01752A	GEAR-FEED IDLE A	1	SA	
5.22-9	JC66-01759A	GEAR-PICKUP IDLE LOW	1	SA	
5.22-10	JC61-02240A	COLLAR-PICKUP	1	SNA	
5.22-11	6107-001171	SPRING-TS	1	SNA	
5.22-12	JC66-01760A	GEAR-PICKUP IDLE UP	1	SA	Option Unit
5.22-13	6044-000231	RING-E	4	SA	
5.22-14	0604-001095	PHOTO-INTERRUPTER	1	SNA	110V
5.22-15	6502-000132	CABLE CLAMP	2	SNA	220V
5.22-16	6003-000269	SCREW-TAPTITE	6	SNA	110V
5.22-17	JC39-00852A	HARNESS-DADF MOTOR	1	SA	220V
5.22-19	JC39-00855A	HARNESS-DADF REGI SOL	1	SA	
5.22-20	6302-001056	GASKET	1	SA	
5.22-21	JF70-10616A	IPR-WASHER SPRING CU	1	SA	

5.23 Cassette



Cassette Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

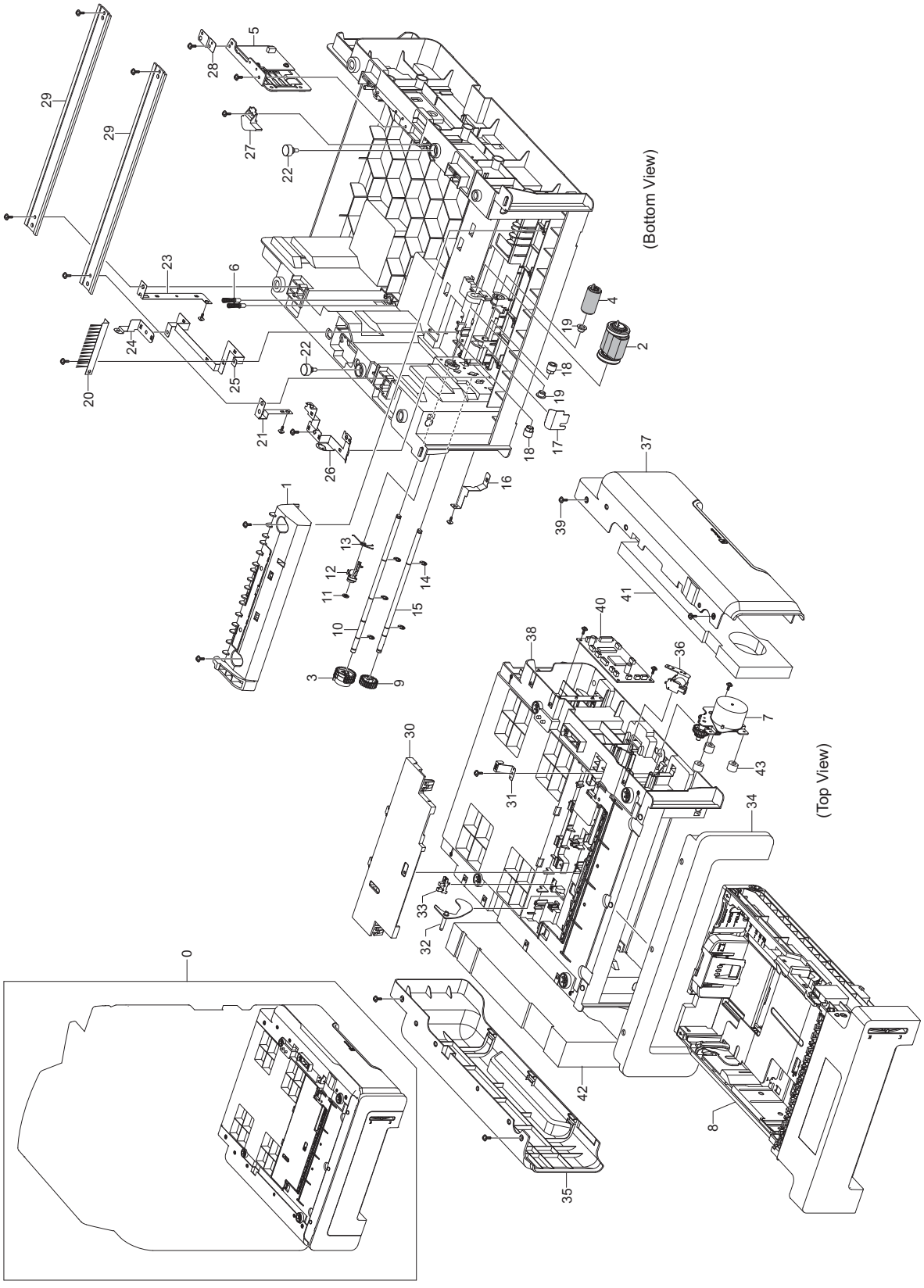
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.23-0	JC96-04498A	ELA HOU-UNIT_CASSETTE	1	SA	
5.23-1	JC97-02897A	MEA UNIT-REGISTRATION	1	SA	
5.23-2	JC97-02888A	MEA-KNOCK_UP_PLATE	1	SNA	
5.23-3	JC97-02887A	MEA-GUIDE_EXETENSION	1	SA	
5.23-4	JC97-02889A	MEA UNIT-GEAR_BASE	1	SNA	
5.23-5	JC97-02893A	MEA-GEAR PICKUP_MP	1	SA	
5.23-6	JC97-02885A	MEA-COVER_CASSETTE	1	SA	
5.23-7	JC97-02892A	MEA-HOLDER PAD_MP	1	SA	
5.23-8	JC97-02891A	MEA-KNOCK_UPP LATE_MP	1	SNA	
5.23-9	JC96-02686B	ELA UNIT-ROLLER P/UP MP	1	SA	
5.23-10	JC97-02890A	MEA-GUIDE PAPER DUP	1	SA	110V
5.23-11	JC97-03077A	MEA-HOLDER_PAD_SHEET	1	SA	220V
5.23-12	JC72-01003A	PMO-IDLE PICK UP MP	2	SA	
5.23-13	JC66-01348A	SHAFT-MP_PICK_UP	1	SA	110V
5.23-14	JC63-01286A	COVER-DRAW_CONNECTOR	1	SNA	220V
5.23-15	JC39-00659A	HARNESS-MPDRA WER_MP	1	SNA	
5.23-16	JC63-01282A	GROUND-REGI_BRKT	1	SNA	
5.23-17	JC66-01403A	ACTUATOR-FEED_EMPTY	1	SA	
5.23-18	0604-001095	PHOTO-INTERRUPTER	1	SNA	
5.23-19	JC61-01865A	GUIDE-PAPER_MPF	1	SNA	
5.23-20	JC66-01347A	ROLLER-FEED	1	SA	
5.23-21	JC72-00972A	PMO-PLATE_LOCKER	1	SNA	
5.23-22	JG61-70531A	SPRING ETC-LOCKER,PLATE	1	SNA	
5.23-23	6107-001166	SPRING-CS	2	SNA	
5.23-24	JC70-00300A	ADJUST-M-CASSETTE_L	1	SNA	
5.23-25	JC70-00301A	ADJUST-M-CASSETTE_R	1	SNA	
5.23-26	JC61-01940A	PLATE-GND_KNOCKUP	1	SNA	
5.23-27	JC63-01291A	SHEET-MPF	1	SNA	
5.23-28	JC61-01923A	PLATE-GND-BRKT-GEAR	1	SNA	110V
5.23-29	JC61-01128A	HOLDER-_M_GEAR REGI	1	SNA	220V
5.23-30	6107-001249	SPRING-CS	1	SNA	
5.23-31	JC66-00774A	GEAR-M-REGI	1	SA	
5.23-32	JC61-01127A	HOLDER-_M_CLUTCH GEAR	1	SNA	
5.23-33	JC63-01285A	COVER-GEAR_BOX	1	SNA	
5.23-34	JC33-00022A	SOLENOID-PICK_UP	1	SA	
5.23-35	JC66-01355A	LEVER-LINK_INDICATOR	1	SNA	
5.23-36	JG66-40003A	GEAR-PINION	1	SNA	
5.23-37	JC66-00764A	ROLLER-IDLE FEED	2	SA	Option Unit
5.23-38	JC61-01274A	SPRING ETC-ROLLER	2	SNA	

Cassette Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.23-39	JC72-41191B	PMO-BEARING SHAFT	2	SA	110V
5.23-40	JC61-00699A	BUSH-D6/L4	2	SA	220V
5.23-41	6003-000196	SCREW-TAPTITE	10	SNA	110V
5.23-42	6044-000125	RING-E	3	SNA	220V
5.23-43	JC61-01856A	FRAME-CASSETTE	1	SNA	

5.24 SCF Unit



SCF Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

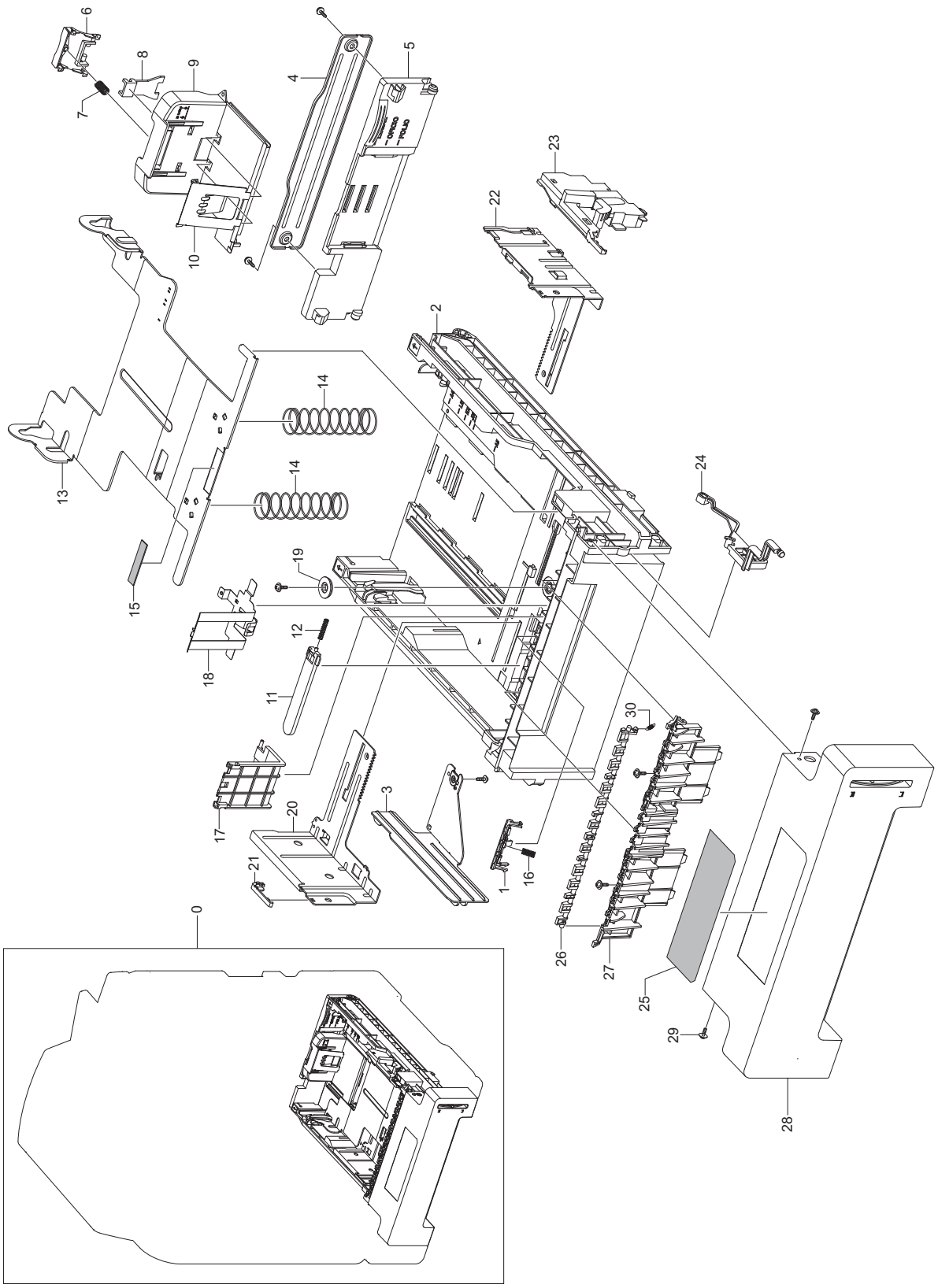
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.24-0	JC96-05547A	ELA HOU-UNIT_SCF		SNA	
5.24-1	JC96-04019A	ELA UNIT-IDLE_SCF	1	SA	
5.24-2	JC97-02233A	MEA UNIT-P/UP_HOUSING	1	SA	
5.24-3	JC97-02691A	MEA UNIT-GEAR_PICK_UP	1	SA	
5.24-4	JC81-03458A	AS-UNIT_FEED1	1	SA	
5.24-5	JC96-02127A	ELA HOU-CST SENSOR HAWK16	1	SA	
5.24-6	JC97-01401A	MEA UNIT-TERMINAL:TR	6	SA	
5.24-7	JC96-03956A	ELA UNIT-MOTOR SCF	1	SA	
5.24-8	JC96-04954A	ELA HOU-CASSETTE	1	SA	
5.24-9	JC66-01262A	GEAR-FEED	1	SA	
5.24-10	JC66-01277A	SHAFT-PICK UP_SCF	1	SA	110V
5.24-11	6044-000001	RING-CS	1	SNA	220V
5.24-12	JC61-01743A	HOLDER-PICK_UP_SCF	1	SNA	
5.24-13	6107-001170	SPRING-TS	1	SA	110V
5.24-14	6044-000125	RING-E	5	SNA	220V
5.24-15	JC66-01276A	SHAFT-FEED_SCF	1	SA	
5.24-16	JC63-01137A	GROUND-P_MOTOR_SCF	1	SNA	
5.24-17	JC63-01163A	SHEET-GUIDE_PATH	1	SA	
5.24-18	JC61-01579A	HOLDER-P-REGI	2	SNA	
5.24-19	JC66-10202A	BEARING-PICK UP	2	SA	
5.24-20	JC67-00204A	BRUSH-PICK	1	SNA	
5.24-21	JC63-01136A	GROUND-P_FRONT_BOTTOM	1	SNA	
5.24-22	JC61-40001A	FOOT-ML80	2	SA	
5.24-23	JC63-01140A	GROUND-P_REAR_BOTTOM	1	SNA	
5.24-24	JC61-01904A	PLATE-GND_REAR_TOP	1	SNA	
5.24-25	JC61-01903A	PLATE-GND_FRAME_SCF	1	SNA	
5.24-26	JC63-01141A	GROUND-P_SHAFT	1	SNA	
5.24-27	JC72-01355A	PMO-REMOVE_LOCK_CST	1	SA	
5.24-28	JC63-00675A	GROUND-P-PAPER_SIZE	1	SNA	110V
5.24-29	JC71-00042A	BAR-P_CROSS	2	SA	220V
5.24-30	JC63-00686B	COVER-M-DUMMY_SCF	1	SA	
5.24-31	JC70-11028A	IPR-GROUND TOP	1	SNA	
5.24-32	JC72-00992A	PMO-ACTUATOR EMPTY,SCF	1	SA	
5.24-33	0604-001095	PHOTO-INTERRUPTER	1	SA	
5.24-34	JC63-01539A	COVER-FRONT_SCF	1	SA	
5.24-35	JC63-01538A	COVER-LEFT_SCF	1	SA	
5.24-36	JC33-00012A	SOLENOID-MAIN	1	SA	
5.24-37	JC63-01537A	COVER-RIGHT_SCF	1	SA	Option Unit
5.24-38	JC61-01902A	FRAME-SCF	1	SNA	
5.24-39	6003-000196	SCREW-TAPTITE	23	SA	110V

SCF Unit Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

Drawer#	SEC_code	Description	QT'y	Service	Remark
5.24-40	JC92-01911A	PBA-SCF	1	SA	220V
5.24-41	JC72-01413A	SPONGE-COVER-R	1	SA	110V
5.24-42	JC72-01414A	SPONGE-COVER-L	1	SA	220V
5.24-43	JC73-00278A	RUBBER-NOP	3	SNA	

5.25 SCF Cassette



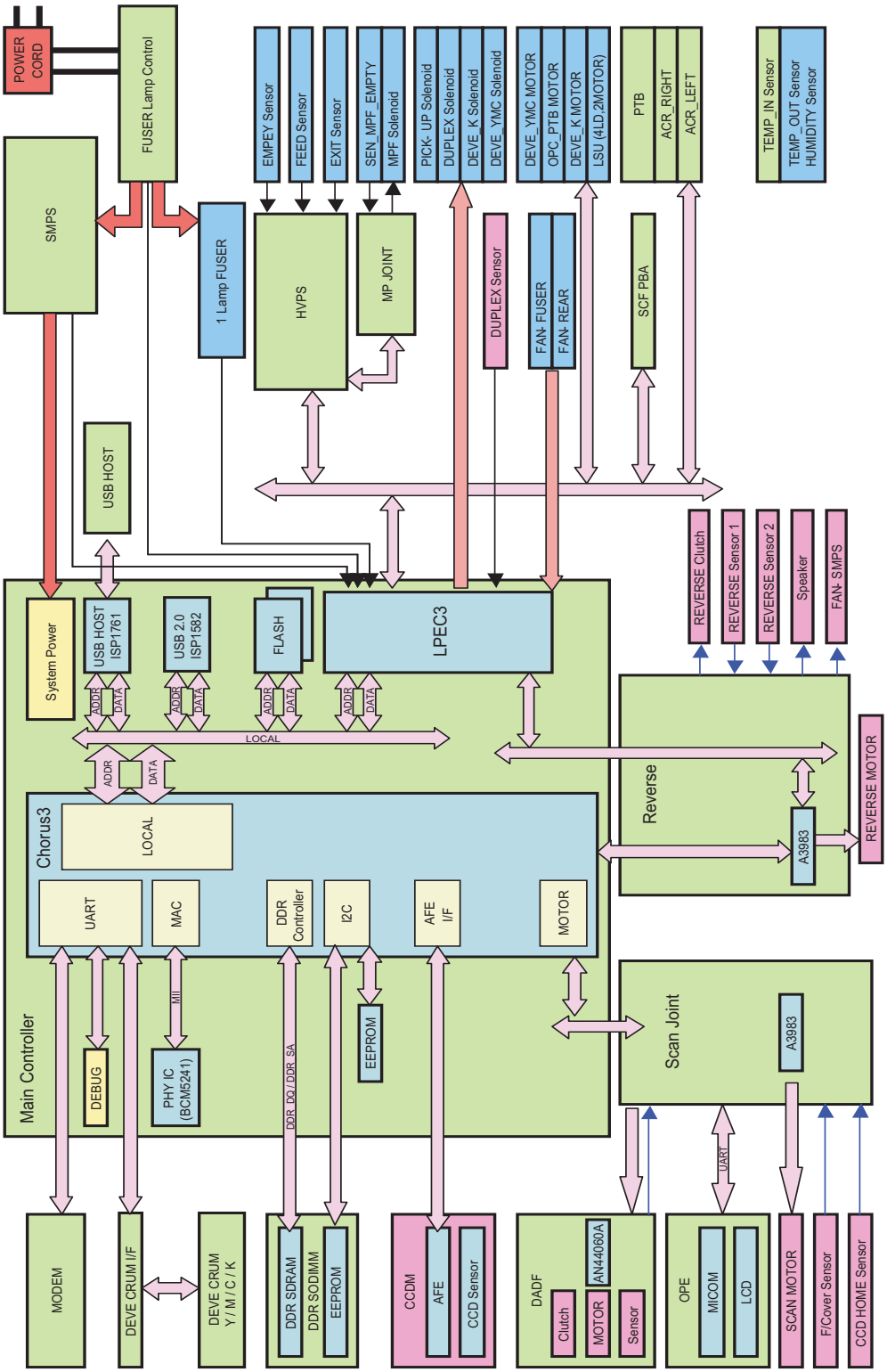
SCF Cassette Parts List

SA : SERVICE AVAILABLE, SNA : SERVICE not AVAILABLE

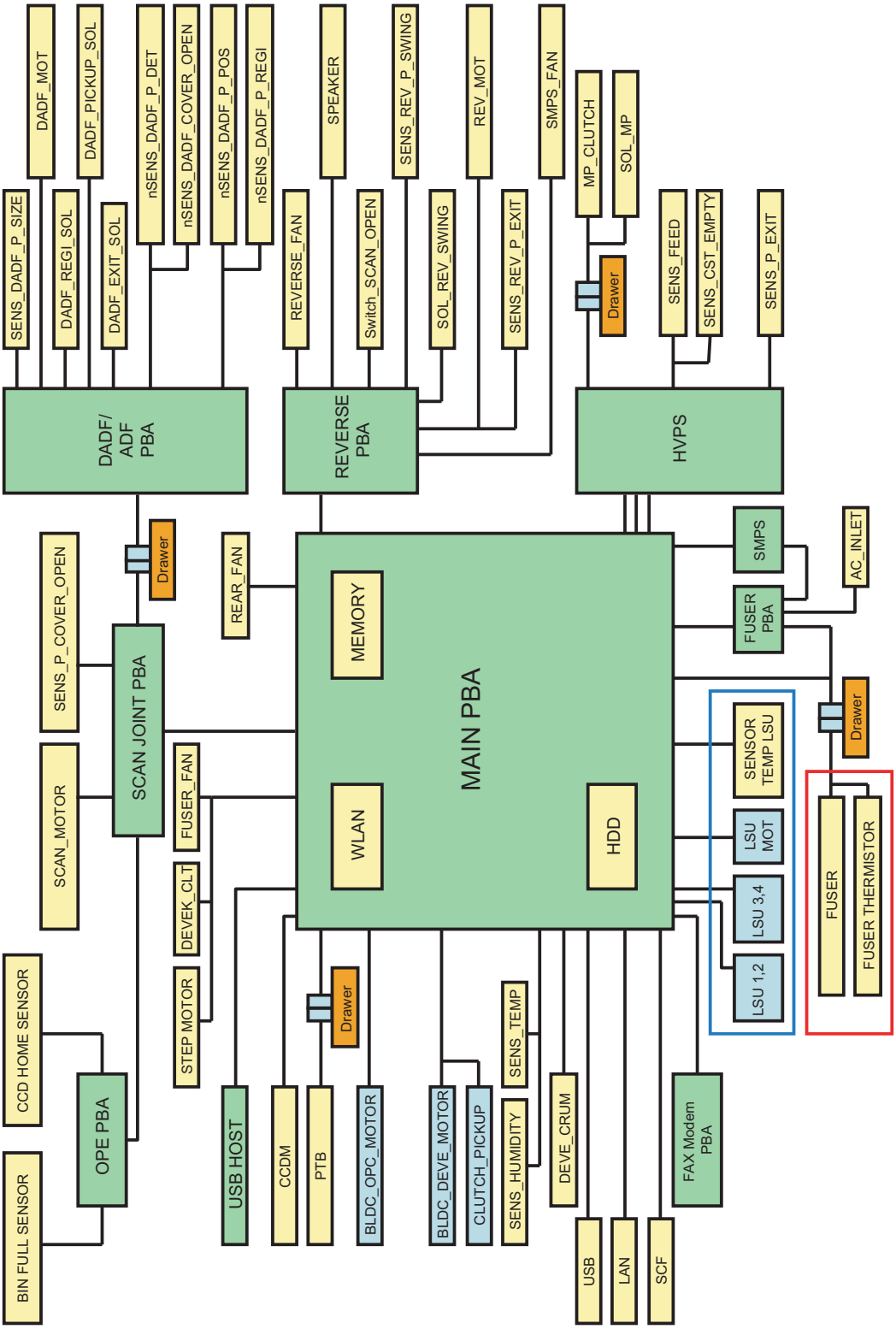
Drawer#	SEC_code	Description	QT'y	Service	Remark
5.25-0	JC90-00933A	SCF-CASSETTE	1	SA	
5.25-1	JC97-03133A	MEA-UNIT_HOLDER PAD	1	SNA	
5.25-2	JC61-01220D	FRAME-M_CASSETTE	1	SNA	
5.25-3	JC61-01227A	GUIDE-M-PAPER SIZE	1	SNA	
5.25-4	JC61-01223A	FRACKET-P-EXTENTION	1	SNA	
5.25-5	JC61-01224D	GUIDE-M_EXTENSION CST	1	SA	
5.25-6	JC64-00190C	KNOB-M_REAR	1	SNA	
5.25-7	JC61-00414A	SPRING ETC-GUIDE PAPER	2	SA	
5.25-8	JC61-00267B	GUIDE-M-LOCK A	1	SA	
5.25-9	JC61-01226C	GUIDEM_REAR	1	SNA	
5.25-10	JC61-00751A	GUIDE-P-REAR PAPER CST	1	SA	110V
5.25-11	JC72-41210A	PMO-LOCKER PLATE	1	SA	220V
5.25-12	JC61-70531A	SPRING ETC-LOCKER_PLATE	1	SNA	
5.25-13	JC61-01245A	PLATE-P-KNOCK UP	1	SNA	110V
5.25-14	JC61-00455A	SPRING ETC-PLATE K/UP	1	SA	220V
5.25-15	JC73-00141A	RPR-PAD CASSETTE	1	SA	
5.25-16	JC61-70911A	SPRING ETC-EXIT ROLL FD	1	SA	
5.25-17	JC61-01228A	HOLDER-M-PAD_HOUSING	1	SNA	
5.25-18	JC63-01206A	GROUND-CASSETTE	1	SA	
5.25-19	JC66-40003A	GEAR-PINION	1	SNA	
5.25-20	JC67-01222A	GUIDE-P-SIDE_L	1	SNA	
5.25-21	JC67-00037A	CAP-M-GUIDE SIDE_L	1	SNA	
5.25-22	JC61-01244A	GUIDE-P-SIDE_R	1	SNA	
5.25-23	JC61-01225C	GUIDE-M_SIDE LOCK	1	SNA	
5.25-24	JC66-01409B	LEVER-INDICATOR_SCF	1	SNA	
5.25-25	JC68-01552A	LABEL¢Á-CASSETTE	1	SNA	
5.25-26	JC64-00268A	SHUTTER-PATH	1	SNA	
5.25-27	JC61-01724A	GUIDE-PAPER	1	SNA	
5.25-28	JC63-01306C	COVER_HANDLE	1	SNA	110V
5.25-29	6002-000440	SCREW-TAPPING	8	SNA	220V
5.25-30	JC61-00064A	SPRINGE-ETC-CLAW	1	SNA	

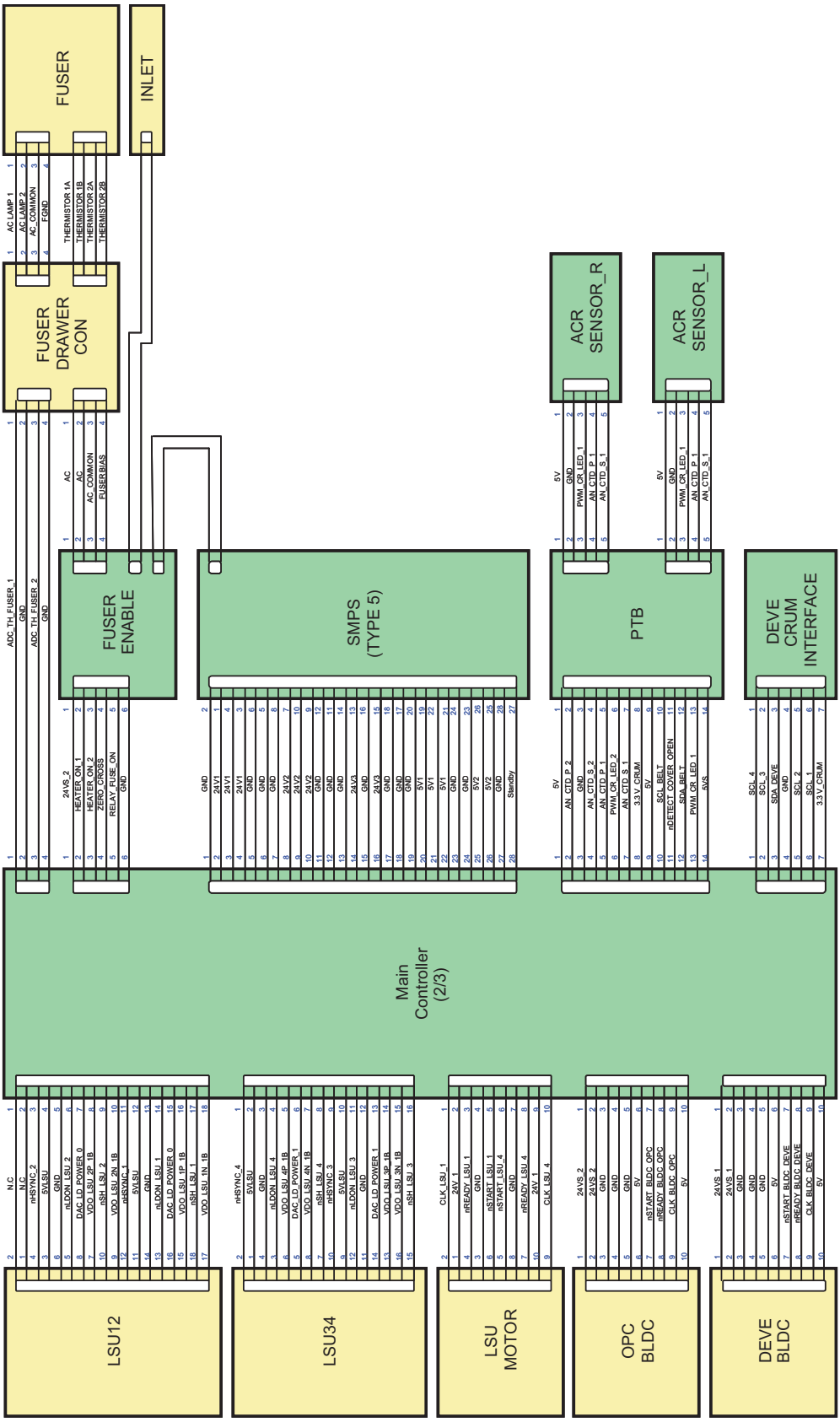
6. System Diagram

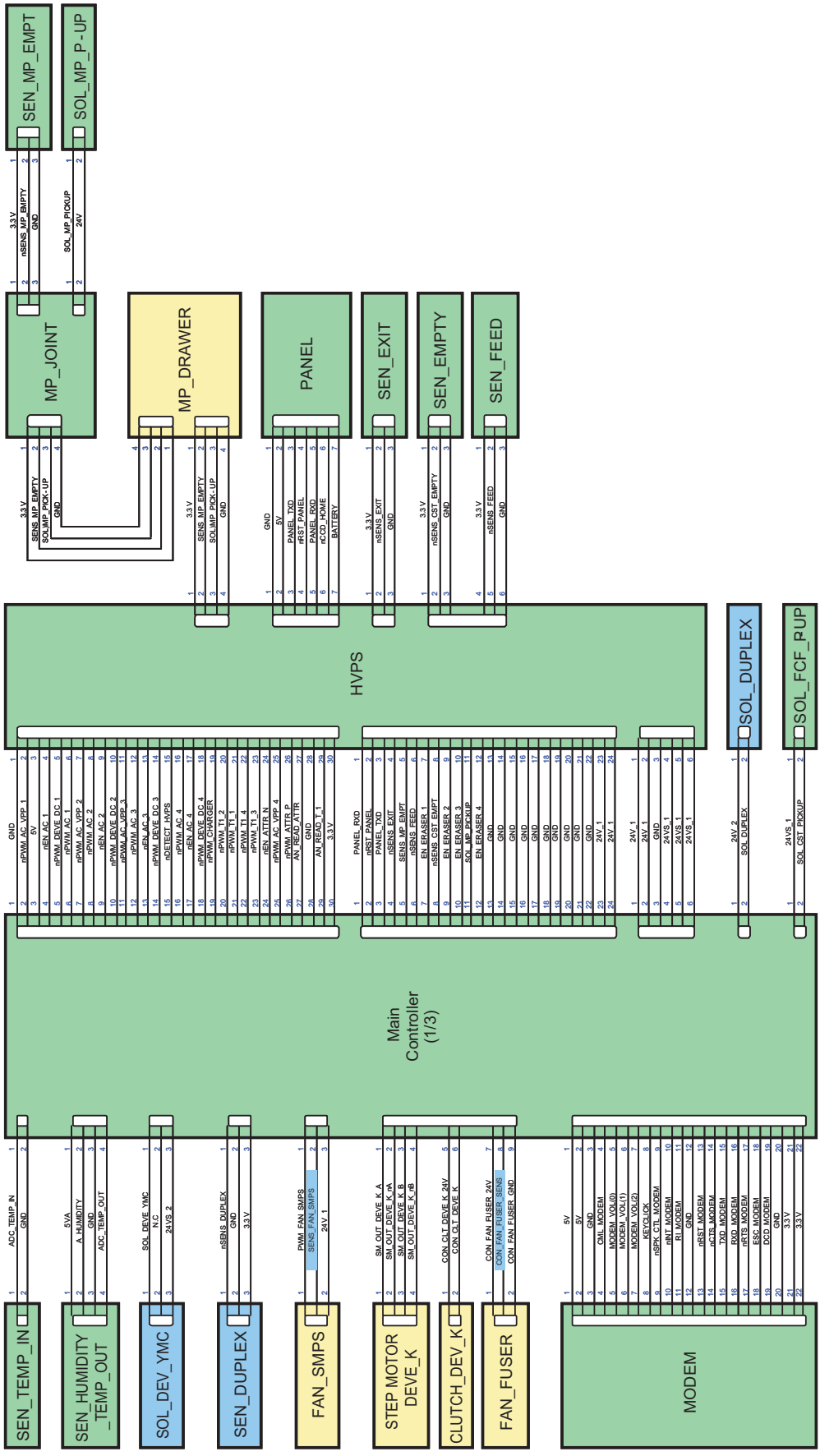
6.1 Block Diagram

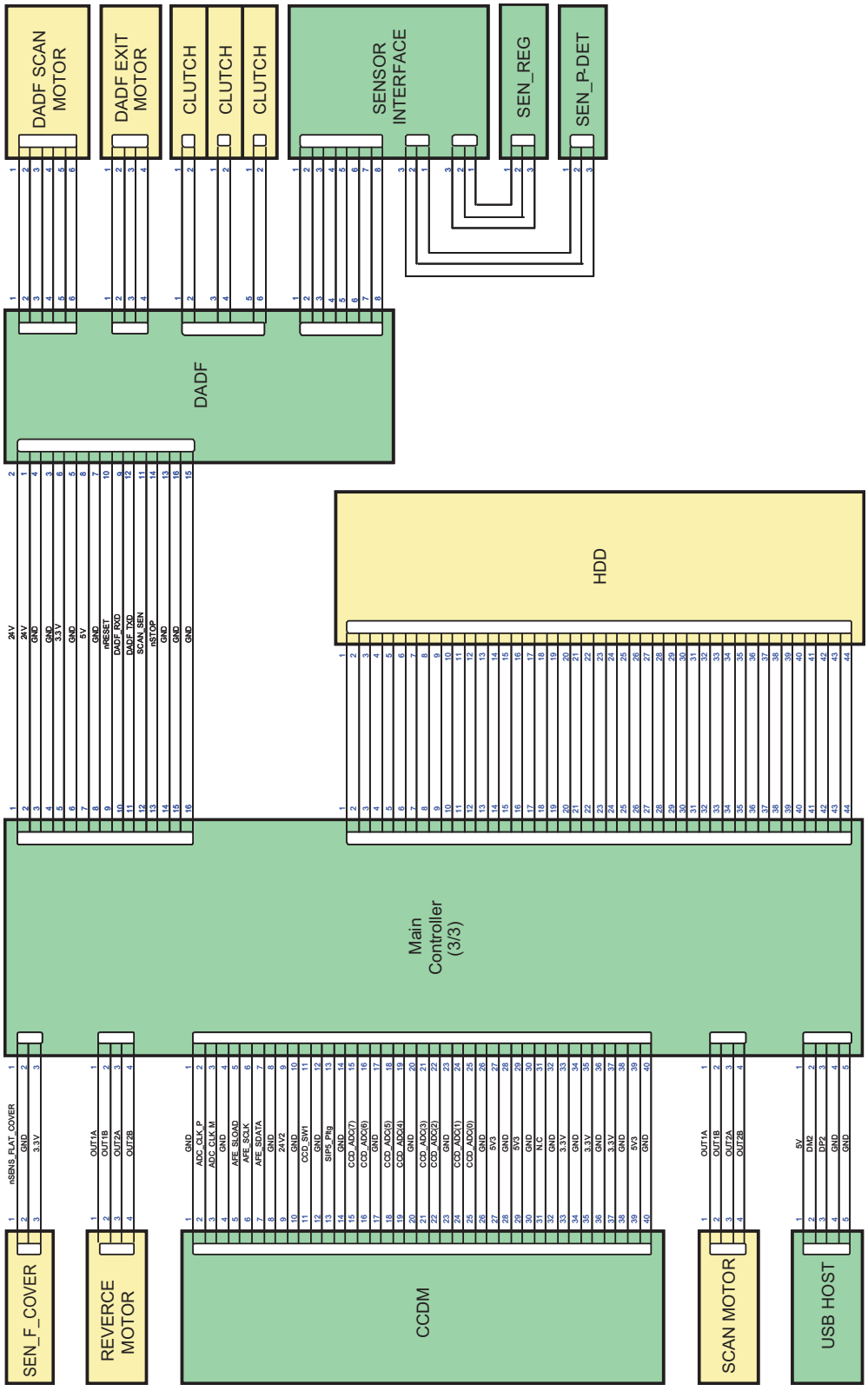


6.2 Connection Diagram




FUSER
INLET
FUSER DRAWER CON
FUSER ENABLE
SMPS (TYPE 5)
PTB
ACR SENSOR_R
ACR SENSOR_L
DEVE CRUM INTERFACE
Main Controller (2/3)
LSU12
LSU34
LSU MOTOR
OPC BLDC
DEVE BLDC


SEN_TEMP_IN
SEN_HUMIDITY _TEMP_OUT
SOL_DEV_YMC
SEN_DUPLEX
FAN_SMPS
STEP MOTOR DEVE_K
CLUTCH_DEV_K
FAN_FUSER
MODEM
Main Controller (1/3)
HVPS
MP_JOINT
MP_DRAWER
PANEL
SEN_EXIT
SEN_EMPTY
SEN_FEED
SEN_MP_EMPT
SOL_MP_P-UP
SOL_DUPLEX
SOL_FCF_PUP


DADF SCAN MOTOR
DADF EXIT MOTOR
CLUTCH
CLUTCH
CLUTCH
SENSOR INTERFACE
SEN_REG
SEN_P-DET
DADF
HDD
Main Controller (3/3)
SEN_F_COVER
REVERCE MOTOR
CCDM
SCAN MOTOR
USB HOST

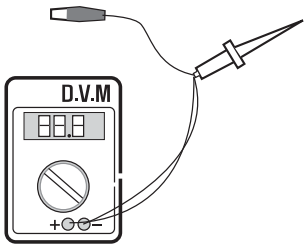
7. Reference Information

This chapter contains the tools list, list of abbreviations used in this manual, and a guide to the location space required when installing the printer. A definition of tests pages and Network information definition is also included.

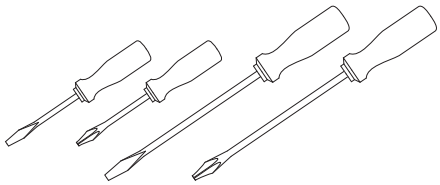
7.1 Tools for Troubleshooting

The following tools are recommended safe and easy troubleshooting as described in this service manual.

- **DVM(Digital Volt Meter)**
  Standard : Indicates more than 3 digits.



- **Driver**
  Standard : "-" type, "+" type (M3 long, M3 short, M2 long, M2 short).

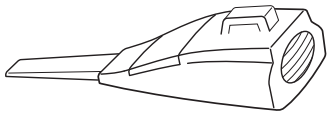


- **Tweezers**
  Standard : For general home use, small type.

- **Cotton Swab**
  Standard : For general home use, for medical service.

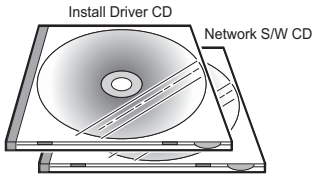
- **Cleaning Equipment**
  Standard : An IPA (Isopropyl Alcohol) dry wipe tissue or a gentle neutral detergent and lint-free cloth.

- **Vacuum Cleaner**



- **Brush**

- **Software (Driver) installation CD ROM**



7.2 Acronyms and Abbreviations

The table below explains the abbreviations and acronyms used in this service manual. Where abbreviations or acronyms are used in the text please refer to this table.

ADC	Analog-to-Digital-Conversion
AP	Access Point
AC	Alternating Current
ASIC	Application Specific Integrated Circuit
ASSY	Assembly
BIOS	Basic Input Output System
BLDC Motor	Brushless DC Motor
CLBP	Color Laser Beam Printer
CMOS	Complementary Metal Oxide Semiconductor
CMYK	Cyan, Magenta, Yellow, Black
CN	Connector
CON	Connector
CPU	Central Processing Unit
CTD Sensor	Color Toner Density Sensor
dB	Decibel
dBA	A-Weighted decibel
dBm	Decibel milliwatt
DC	Direct Current
DCU	Diagnostic Control Unit
DIMM	Dual In-line Memory Module
DPI	Dot Per Inch
DRAM	Dynamic Random Access Memory
DVM	Digital Voltmeter
ECP	Enhanced Capability Port
ECU	Engine Control Unit
EEPROM	Electronically Erasable Programmable Read Only Memory
EMI	Electro Magnetic Interference
EP	Electro photographic
EPP	Enhanced Parallel Port
F/W	Firmware
FCF/FCT	First Cassette Feeder/First Cassette Tray
FISO	Front-In, Side-Out
FPOT	First Print out Time
GDI	Windows Graphic Device Interface
GIF	Graphic Interchange Format
GND	Ground
HBP	Host Based Printing
HDD	Hard Disk Drive
HTML	Hyper Text Transfer Protocol
HV	High Voltage
HVPS	High Voltage Power Supply
I/F	Interface
I/O	Input and Output
lb	Pound(s)
IC	Integrated Circuit
ICC	International Color Consortium
IDE	Intelligent Drive Electronics or Integrated Drive Electronics
IEEE	Institute of Electrical and Electronics Engineers. Inc
IOT	Image Output Terminal (Color printer, Copier)
IPA	Isopropyl Alcohol
IPC	Inter Process CommunicationEPP Enhanced parallel Port
IPM	Images Per Minute
ITB	Intermediate Transfer Belt
LAN	local area network
LBP	Laser Beam Printer
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LSU	Laser Scanning Unit
MB	Megabyte
MHz	Megahertz
MPBF	Mean Prints Between Failure
MPF/MPT	Multi Purpose Feeder/Multi Purpose Tray
NIC	Network Interface Card
NPC	Network Printer Card
NVRAM	Nonvolatile Random Access Memory
OPC	Organic Photo Conductor
PBA	Printed Board Assembly
PCL	Printer Command Language, Printer Control Language

PCI	Peripheral Component Interconnect by Intel 1992/6/22, is a local bus standard developed by Intel and introduced in April, 1993 : A60, B60 Pins
PCL5Ce	Printer Command Language 5Ce-Color
PCL6	Printer Command Language 6
PDF	Portable Document Format
PDL	Page Description Language
Ping	Packet internet or Inter-Network Groper
PPD	Postscript Printer Discription
PPM	Page Per Minute
PS	Post Script
PS3	Post Script Level3
PTL	Pre-Transfer Lamp
PTB	Paper-Transfer Belt
PWM	Pulse Width Moduration
Q?y	Quantity
RAM	Random Access Memory
RCP	Remote Control Panel
ROM	Read Only Memory
SCF/SCT	Second Cassette Feeder/Second Cassette Tray
SMPS	Switching Mode Power Supply
SPGP	SEC Printer Graphic Processor
SPL	SEC Printer Language
SPL-C	SEC Printer Language-Color
Spool	Simultaneous Peripheral Operation Online
SRS	Software Requirment Specification
SURF	Surface Rapid Fusing
SW	Switch
sync	Synchronous or Synchronization
T1	ITB
T2	Transfer Roller
TRC	Toner Reproduction Curve
PnP	Universal Plug and Play
U.I.	User Interface
URL	Uniform Resource Locator
USB	Universal Serial Bus
VCCI	Voluntary Control Council for Interference Information Technology Equipment

7.3 Select a location for the printer

• Leave enough room to open the printer trays, covers, and allow for proper ventilation. (see diagram below)

• Provide the proper environment :
- A firm, level surface
- Away from the direct airflow of air conditioners, heaters, or ventilators
- Free of extreme fluctuations of temperature, sunlight, or humidity
- Clean, dry, and free of dust